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12 UNITED STATES DISTRICT COURT

13 NORTHERN DISTRICT OF CALIFORNIA, SAN FRANCISCO DIVISION

14 SAN FRANCISCO HERRING  
15 ASSOCIATION; and DAN CLARKE,

16 Plaintiffs,

17 vs.

18 PACIFIC GAS AND ELECTRIC COMPANY;  
19 and PG&E CORPORATION

20 Defendants.

Case No. 14-cv-04393 WHO (JCS)

**[PROPOSED] CONSENT DECREE  
BETWEEN THE PLAINTIFF SAN  
FRANCISCO HERRING ASSOCIATION  
AND DEFENDANTS**

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1 **1. INTRODUCTION**

2 1.1. **The Parties.** This Consent Decree—inclusive of the Exhibits hereto, which are all  
3 incorporated herein by reference —is entered into by and between plaintiff San Francisco Herring  
4 Association ("SFHA"), on the one hand, and Pacific Gas and Electric Company and PG&E  
5 Corporation (collectively, "PG&E"), on the other hand. SFHA and PG&E collectively are  
6 referred to herein as the "Parties" and each of them as a "Party."

7 1.2. SFHA is a California non-profit, unincorporated association whose membership at  
8 the time this lawsuit was filed was comprised of those members listed on SFHA's "Certificate of  
9 Interested Entities or Persons," filed in this action on September 30, 2014 [Dkt. No. 5], and  
10 currently is made up of San Francisco Bay commercial herring fishermen. SFHA was formed to  
11 protect the San Francisco herring fishery, including without limitation the health and maintenance  
12 of the herring stock on which the fishery depends, and to advocate, on behalf of its members,  
13 activities related to herring fishing, including protection of the San Francisco Bay herring stock.

14 1.3. PG&E Corporation is a corporation organized and existing under the laws of the  
15 State of California, with its principal place of business in San Francisco, California. Pacific Gas  
16 and Electric Company is a corporation organized and existing under the laws of the State of  
17 California, with its principal place of business in San Francisco, California, and is a subsidiary of  
18 PG&E Corporation.

19 1.4. SFHA's co-plaintiff in this action, Daniel Clarke ("Clarke"), is not a party to this  
20 Consent Decree and is not bound by its terms.

21 1.5. **General Allegations.** SFHA alleges that PG&E formerly owned and operated  
22 three manufactured gas plants ("MGPs") in the present-day Marina and Fisherman's Wharf  
23 neighborhoods of San Francisco, the North Beach MGP, the Fillmore MGP, and the Beach  
24 Street MGP (the "Former MGPs") which manufactured gas used for lighting, heating, and  
25 cooking purposes in the late nineteenth century and early 20th century.

26 1.6. The "Former North Beach MGP Site" is approximately 9.5 acres in size and is  
27 located within the area bounded by Bay Street to the south, Webster Street to the west,  
28 Buchanan Street and Laguna Street to the east, and the San Francisco Marina and North Point

1 Street to the north. The site is comprised of those parcels lying within the area designated by  
2 the City and County of San Francisco Office of the Assessor-Recorder as Block Numbers 0459,  
3 0460A, 0445A, 0463B, and 0900. The Former North Beach MGP Site is depicted on "Exhibit  
4 1".

5 1.7. The "Former Fillmore MGP Site" is approximately 9.1 acres in size. It is  
6 comprised of those parcels lying within the area designated by the City and County of San  
7 Francisco Office of the Assessor-Recorder as Block Nos. 0462A, 0463A, 0466A, 0467A, and  
8 0468A. The Former Fillmore MGP Site is depicted on "Exhibit 2".

9 1.8. The "Former Beach Street MGP Site" is approximately 0.3 acres in size and is  
10 bordered by Beach Street on the south, Mason Street on the west, and Powell Street on the east,  
11 and Jefferson Street (also called Lincoln Highway) on the north. It is identified as San Francisco  
12 Assessor's Parcel Number 0014-001. The Former Beach Street MGP Site is depicted on  
13 "Exhibit 3".

14 1.9. The Former North Beach MGP Site, the Former Fillmore MGP Site, and the  
15 Former Beach Street MGP Site are sometimes collectively referred to herein as the "Former  
16 MGP Sites." The term "Former MGP Sites" does not include within its meaning any site other  
17 than the Former North Beach MGP Site, the Former Fillmore MGP Site, and the Former Beach  
18 Street MGP Site. The term Former MGPs does not include within its meaning any facility other  
19 than the North Beach MGP, the Fillmore MGP, and the Beach Street MGP.

20 1.10. **Notice of Intent to Sue/Complaint.** On or about April 29, 2014, SFHA and  
21 Clarke served PG&E and state and federal regulatory enforcement agencies with a document  
22 entitled "Notice of Intent to Sue Under the Resource Conservation and Recovery Act ("RCRA")  
23 and the Clean Water Act ("CWA") (the "Notice"). The Notice alleged that the former MGP  
24 operations by PG&E violated RCRA, specifically, 42 U.S.C. § 6972(A)(1)(B), because PG&E's  
25 placement of MGP residues at and in the vicinity of the Former MGP Sites allegedly caused  
26 contamination of the soil, groundwater and surface water, which SFHA and Clarke alleged may  
27 present an imminent and substantial endangerment to health and/or the environment. In addition,  
28 the Notice alleged violations of the CWA (33 U.S.C. §§ 1311, 1342 and 1365) by PG&E for the

1 alleged discharge of MGP residues from the Former MGP Sites into the San Francisco Bay  
2 without a permit. SFHA and Clarke indicated their intention to file a citizen suit under RCRA  
3 and the CWA with regard to these alleged violations.

4 1.11. PG&E has denied and continues to deny these and all other material allegations  
5 made by SFHA and Clarke in the Notice. No federal or state agency has commenced or is  
6 diligently prosecuting a civil or criminal action in any court relating to the violations alleged in  
7 the Notice. Nor has any state or federal agency ever informed PG&E that a permit is required  
8 under RCRA or the CWA for any of the Former MGP Sites or for any MGP-related residues.

9 1.12. On September 30, 2014, SFHA and Clarke filed a complaint against PG&E  
10 asserting the RCRA and CWA claims described in the Notice, and also for public nuisance,  
11 private nuisance (Clarke), trespass (Clarke), negligence, strict liability, and declaratory relief  
12 (SFHA).

13 1.13. Following the denial of PG&E's motion to dismiss the complaint, SFHA and  
14 Clarke filed a first amended complaint on March 9, 2015, asserting the same causes of action as  
15 alleged in the complaint (the "First Amended Complaint" or "FAC"). PG&E filed an answer to  
16 the First Amended Complaint on March 30, 2015, in which it denied all material allegations of  
17 the First Amended Complaint and asserted numerous affirmative defenses.

18 1.14. **Mediated Investigation Agreement.** On October 1, 2015, SFHA, Clarke, and  
19 PG&E entered into a Mediated Investigation Agreement ("MIA") for the purpose of determining  
20 the nature and extent of MGP residue in the "Investigation Area," as defined in the MIA. The  
21 MIA was subsequently amended six times by the parties to it through five addenda and  
22 statements on the record. The MIA, as amended and inclusive of its addenda, is referred to  
23 herein as the "MIA". The MIA expired by its terms on December 1, 2017, and is of no further  
24 force or effect.

25 1.15. **MIA Investigations.** PG&E worked jointly with SFHA and Clarke under the  
26 MIA to develop and implement work plans for soil and groundwater investigations on and  
27 around the Former MGP Sites under the oversight of the Regional Water Quality Control Board  
28

1 – San Francisco Region ("Regional Board") and the State of California Department of Toxic  
2 Substances Control ("DTSC").

3 1.16. **Additional PG&E Investigations and Remediations.** PG&E has also conducted  
4 and is conducting other soil, soil gas, groundwater, and offshore sediment investigations and  
5 certain remedial activities on or around the Former MGP Sites, and in and along San Francisco  
6 Bay, including those areas adjacent to the Former North Beach MGP Site and the Former Beach  
7 Street MGP Site, pursuant to Voluntary Cleanup Agreements ("VCAs") entered into with DTSC  
8 for each of the Former MGP Sites, and pursuant to investigative orders concerning offshore  
9 sediment issued by the Regional Board to PG&E and the City and County of San Francisco  
10 ("CCSF") in 2017.

11 1.17. **Jurisdiction and Venue.** For purposes of this Consent Decree only, the Parties  
12 stipulate that this Court has jurisdiction over PG&E as to the allegations contained in the First  
13 Amended Complaint, that venue is proper in the Northern District of California, and that this  
14 Court has jurisdiction to approve, enter, and enforce this Consent Decree as a full and final  
15 binding resolution of all claims that were or could have been asserted by SFHA in the Notice  
16 and the First Amended Complaint based on the facts or conduct alleged therein.

17 1.18. **No Admissions.** SFHA and PG&E enter into this Consent Decree as a negotiated  
18 resolution of disputed claims. PG&E denies all material allegations contained in the Notice and  
19 the First Amended Complaint. SFHA denies the adequacy and merit of any defense raised by  
20 PG&E to such material allegations. This Consent Decree and any payments made or actions  
21 taken pursuant to this Consent Decree do not constitute, nor shall they be construed as, an  
22 adjudication, or an admission by PG&E, of any fact, finding, issue of law, conclusion of law, or  
23 violation of law, or of any liability, wrongdoing, responsibility, or tortious or illegal conduct  
24 whatsoever, such being specifically disputed and denied by PG&E. Except as expressly  
25 provided in this Consent Decree, nothing in this Consent Decree shall prejudice, waive or impair  
26 any right, remedy, argument or defense the Parties may have in any administrative or judicial  
27 proceeding, except all Parties waive any rights of appeal with respect to this Consent Decree and  
28 as otherwise set forth herein. This Consent Decree, its terms and provisions, as well as any

1 discussions or other communications relating to this Consent Decree, past, present, or future,  
2 shall not be offered or received in evidence in any action or proceeding, whether legal, equitable  
3 or administrative, or utilized in any other manner whatsoever, as an admission or concession of  
4 liability, wrongdoing, responsibility or tortious or illegal conduct on the part of PG&E.

5 1.19. This Consent Decree reflects a full, fair and reasonable resolution of SFHA's  
6 claims against PG&E raised in this lawsuit and the matters addressed by this Consent Decree.

7 **2. DEFINITIONS.** In addition to definitions defined within the body of this Consent Decree,  
8 the following definitions apply.

9 2.1. **Approved RAP.** The term "Approved RAP" shall mean a remedial action plan  
10 ("RAP") that has been: (a) approved by the Regional Board or the State Water Resources  
11 Control Board (the "State Water Board," collectively with the Regional Board, the "Board"); (b)  
12 approved by any other regulatory agency with jurisdiction; and (c) upheld by the Panel after an  
13 appeal, if any, by SFHA under Section 5.

14 2.2. **Chemical Performance Standard.** The term "Chemical Performance Standard"  
15 shall mean 15 µg/L Total Trigger PAHs in pore water.

16 2.3. **Chemical Performance Standard Testing.** The term "Chemical Performance  
17 Standard Testing" shall mean the sampling of pore water and analyzing it to determine whether  
18 the Chemical Performance Standard has been exceeded, in accordance with "**Exhibit 12**" and  
19 Section 4.5.

20 2.4. **Compliance Wells.** The term "Compliance Wells" shall have the meaning given  
21 in Section 4.2.3.1.

22 2.5. **Effective Date.** The term "Effective Date" shall have the meaning given in  
23 Section 11.3.

24 2.6. **"Final" as to Board Approvals and Determinations.** The term "final," when  
25 referring to Regional Board or State Water Board approvals or determinations, shall have the  
26 meaning given in Section 4.3.5.1.

27 2.7. **First Amended Complaint or FAC.** The term "First Amended Complaint" or  
28 "FAC" shall have the meaning given in Section 1.13.

1           2.8.    **GW PAHs.** The term "GW PAHs" shall mean the PAHs that are included in the  
2 forty (40) chemical semivolatile suite currently utilized in PG&E's groundwater program in San  
3 Francisco.

4           2.9.    **Hundred-Foot Band.** The term "Hundred-Foot Band" ("100' Band") means the  
5 area extending inland for one hundred (100) feet from the mean high tide line of San Francisco  
6 Bay.

7           2.10.   **Mediated Investigation Agreement or MIA.** The term "Mediated Investigation  
8 Agreement" or "MIA" shall have the meaning given in Section 1.14.

9           2.11.   **NAPL.** The term "NAPL" shall mean non-aqueous phase liquid hydrocarbons.

10          2.12.   **Notice.** The term "Notice" shall have the meaning given in Section 1.10.

11          2.13.   **Panel.** The term "Panel" shall have the meaning given in Section 5.

12          2.14.   **Sediment/Pore Water PAHs.** The term "Sediment/Pore Water PAHs" shall have  
13 the meaning given in Section 4.6.1, as identified in "**Exhibit 14**".

14          2.15.   **Supporting Documents.** The term "Supporting Documents" shall have the  
15 meaning given in Section 5.3.4.1.

16          2.16.   **Term.** The term "Term" shall have the meaning given in Section 11.7.

17          2.17.   **Total Trigger PAHs.** The term "Total Trigger PAHs" shall mean the U.S.  
18 Environmental Protection Agency ("U.S. EPA") list of 34 alkyl and parent polycyclic aromatic  
19 hydrocarbon ("PAH") compounds on U.S. EPA's PAH-34 list, as shown on "**Exhibit 4**".

20          2.18.   **Upset Event.** The term "Upset Event" shall mean any of the following: (a) a  
21 publicly-reported storm exceeding the design storm (i.e., greater than a 100-year storm); (b) a  
22 seismic event with a magnitude greater than 5.0 within 50 kilometers (km) of the location of the  
23 respective remedy site, greater than 6.0 within 100 km of the location of the respective remedy  
24 site, or greater than 7.0 within 500 km of the location of the respective remedy site; or (c)  
25 publicly-reported sand boils occurring within the Marina or Fisherman's Wharf neighborhoods,  
26 as shown on the map attached hereto as "**Exhibit 15**".

1 **3. SUPPLEMENTAL ENVIRONMENTAL PROJECTS, OTHER MONETARY**  
2 **PAYMENTS, FEES AND COSTS**

3 3.1. PG&E shall make the following payments as part of the consideration in  
4 exchange for the full and final compromise of all claims by SFHA against PG&E for alleged  
5 violations of the CWA and RCRA, and for SFHA's claims under California state statutory and  
6 common laws for damages and injunctive relief, as set forth in the Notice and FAC, and in  
7 consideration for the releases and covenants not to sue as set forth below:

8 3.2. **Supplemental Environmental Projects – Creosote Removal and Eelgrass**  
9 **Restoration.** Within ninety (90) days of the Effective Date of this Consent Decree, PG&E shall  
10 make the following payments for the following supplemental environmental projects ("SEPs"),  
11 which are intended for the purpose of restoring and enhancing the quality of the waters and  
12 subtidal ecosystem in San Francisco Bay, which will serve to enhance the San Francisco Bay  
13 herring fishery:

14 3.2.1. PG&E shall pay a total of One Million Two Hundred Thousand Dollars  
15 (\$1.2 million) to the State of California Coastal Conservancy (the "Conservancy"), a state  
16 agency whose stated purpose is to preserve, protect, and restore the resources of the California  
17 coast, ocean, and the San Francisco Bay Area, with instructions to allocate those funds for the  
18 Terminal Four Wharf Creosote Removal Project of the San Francisco Bay Creosote Removal  
19 and Pacific Herring Habitat Restoration Project. Said payment shall be made by check payable  
20 to the California State Coastal Conservancy, 1515 Clay Street, 10th Floor, Oakland, CA, 94612,  
21 with notice to SFHA.

22 3.2.2. PG&E shall pay a total of One Million Two Hundred Thousand Dollars  
23 (\$1.2 million) to the Estuary & Ocean Science Center (the "Center") with instructions to allocate  
24 those funds for work to be conducted on eelgrass restoration projects in the San Francisco Bay  
25 as follows: (a) Six Hundred Thousand Dollars (\$600,000) for a project to determine the best  
26 path forward to restoring eelgrass "crop circles" in Richardson Bay, Sausalito, California, which  
27 will involve both assessment of restoration potential and active planting of eel grass in the area;  
28



1 and (b) Six Hundred Thousand Dollars (\$600,000) for a two-part study to determine sources of  
2 eelgrass transplant material and to investigate the utilization of grazer species that enhance  
3 eelgrass growth in San Francisco Bay. Said payment shall be made by check payable to Estuary  
4 & Ocean Science Center, 3150 Paradise Drive, Tiburon, CA, 94920, with notice to SFHA. At  
5 the time of making its payment, PG&E shall notify the Center that the Center is to provide  
6 PG&E and SFHA with annual progress reports on the status of the respective projects, for each  
7 of the three years during which the projects are to be implemented with these SEP funds.

8 **3.3. Supplemental Environmental Project - Herring Permit Retirement**

9 **Program.** Subject to Sections 3.3.1 and 3.3.3, PG&E shall pay to SFHA the total sum of One  
10 Million Eight Hundred Thousand Dollars (\$1.8 Million) for the sole and exclusive purpose of  
11 providing compensation for the permanent retirement of existing commercial herring gill net  
12 permits issued by the California Department of Fish and Wildlife ("Herring Permits") in order to  
13 benefit the restoration and improvement of the herring fishery in California (the "Permit  
14 Retirement Payment"). SFHA agrees that it shall cause the permanent retirement of a minimum  
15 of forty (40) Herring Permits, with a goal of permanently retiring eighty (80) such permits,  
16 within four (4) years of the Effective Date of this Consent Decree (the "Herring Permit  
17 Retirement Program" or "HPRP"). SFHA further agrees that it shall provide to PG&E  
18 confirmation and evidence of its progress in permanently retiring the Herring Permits on an  
19 annual basis.

20 **3.3.1. Proof of Permanent Permit Reduction.** PG&E's payment under Section 3.3  
21 shall not be due and payable to SFHA unless and until PG&E receives from SFHA either of the  
22 following, either of which shall constitute "Proof of Permanent Permit Reduction": (a) written  
23 confirmation from the Department of Fish and Wildlife that the number of available Herring  
24 Permits will be permanently reduced by the number of Herring Permits to be retired in  
25 accordance with Section 3.3 together with evidence of at least forty (40) contracts between  
26 SFHA and individual Herring Permit holders (the "HPRP Contract") under which the Herring  
27 Permit holder agrees, in consideration for the payment received from SFHA under the HPRP  
28 and conditioned upon his or her receipt of such payment, that he or she shall not renew his or her

1 retired Herring Permit or apply at any time in the future for a replacement for his or her retired  
2 Herring Permit, and includes language that the Herring Permit holder waives and releases PG&E  
3 from claims, demands, damages, and liabilities in the same manner and to the same extent as the  
4 release and waiver agreed to by SFHA in Section 9 (except without reference to the MIA) (the  
5 "HPRP Contract Release"); or (b) alternative legally sufficient proof demonstrating that the total  
6 number of Herring Permits available has been reduced by at least forty (40) from the number of  
7 Herring Permits outstanding as of the Effective Date and that at least forty (40) participating  
8 Herring Permit holders have entered into an HPRP Contract including the HPRP Contract  
9 Release. For purposes of this Section 3.3.1, "alternative legally sufficient proof" shall include,  
10 without limitation, an adopted regulation permanently reducing the total number of available  
11 Herring Permits together with evidence of the HPRP Contracts, including the HPRP Contract  
12 Release. PG&E shall only be referenced in the HPRP Contract in the HPRP Contract Release.  
13 SFHA shall be obligated to enforce the HPRP Contracts, with the exception of the HPRP  
14 Contract Release, which PG&E shall be entitled to enforce as an express third party beneficiary  
15 of the HPRP Contract.

16 3.3.1.1. Within ninety (90) days following PG&E's receipt of the Proof  
17 of Permanent Permit Reduction, PG&E shall make the Permit Retirement Payment to SFHA in  
18 accordance with the wire instructions in Section 3.5; provided, however, that in the event the  
19 ninety-day period expires less than sixty (60) days before the end of any calendar year, then  
20 PG&E shall not make the Permit Retirement Payment in said calendar year and the due date for  
21 said payment shall instead automatically be extended to January 30th of the following calendar  
22 year and shall be paid by PG&E to SFHA in January of said year.

23 3.3.2. Costs of Administration. SFHA shall be solely responsible for the costs of  
24 administering the HPRP, which shall be paid for from the Permit Retirement Payment. Such  
25 costs must be reasonable and may not exceed Sixty Thousand Dollars (\$60,000).

26 3.3.3. Contingent Allocation of Funds. In the event SFHA believes it will be  
27 unable to or otherwise fails to provide PG&E with the required Proof of Permanent Permit  
28 Reduction within four (4) years of the Effective Date, then SFHA shall notify PG&E within

thirty (30) days of its knowledge of its inability to satisfy its obligations under Section 3.3. Within ninety (90) days following PG&E's receipt of the foregoing notice, and in lieu of the payment otherwise required under Section 3.3, PG&E shall make payment of Nine Hundred Thousand Dollars (\$900,000) ("Reduced Permit Retirement Payment") to SFHA in accordance with the wire instructions in Section 3.5; provided, however, that in the event the ninety-day period expires less than sixty (60) days before the end of any calendar year, then PG&E shall not make the Reduced Permit Retirement Payment in said calendar year and the due date for said payment shall instead automatically be extended to January 30th of the following calendar year and shall be paid by PG&E to SFHA in January of said year.

3.4. **Other SFHA Payment.** Within ninety (90) days of the Effective Date of this Consent Decree, PG&E shall pay the sum of Three Hundred Thousand Dollars (\$300,000) (the "Other SFHA Payment") to SFHA in accordance with the wire instructions in Section 3.5; provided, however, that in the event the ninety-day period expires less than fifteen (15) days before the end of any calendar year, then PG&E shall not make the Other SFHA Payment in said calendar year and the due date for said payment shall instead automatically be extended to January 30th of the following calendar year and shall be paid by PG&E to SFHA in January of said year. PG&E shall have no responsibility or liability for the ultimate transmittal to or distribution or allocation of the funds PG&E has paid to SFHA, which responsibility shall be solely borne by SFHA.

3.5. **Wire Instructions for SFHA:** The following, in combination with the complete account number which shall be provided by SFHA to PG&E, constitutes the wire instructions for SFHA.

- Account Name: San Francisco Herring Association
- Last Digits of the Account Number: x5382
- Bank: Citibank; 245 Market St.; San Francisco, CA 94111
- Domestic Routing Number: 321171184
- International Swift Code: CITIUS33

1           **3.6. Fees and Costs.**

2           3.6.1. Reimbursement of Accrued Fees and Costs. PG&E shall reimburse SFHA  
3 its reasonable attorneys' fees and costs, including expert consultant costs, incurred from and after  
4 December 1, 2017, through the execution of this Consent Decree for the court-supervised and  
5 out-of-court settlement negotiations and related work, leading up to and including preparation of  
6 this Consent Decree, which would be compensable under the standard established by § 505 of  
7 the Clean Water Act, 33 U.S.C. § 1365(d), and applicable case law interpreting that standard.  
8 SFHA shall provide to PG&E the invoices for which reimbursement is sought. SFHA and its  
9 counsel, by approving this Consent Decree as to its form, each agree and acknowledge that such  
10 payment shall constitute full and final payment of all attorneys' fees, expert/consultant fees, and  
11 costs for services rendered by Gross & Klein, EnviroAssets, and all other attorneys and  
12 consultants, during said timeframe, and neither SFHA nor its counsel or consultants shall be  
13 entitled to seek any additional fees or costs from PG&E relating to said work. In the event that  
14 an agreement is reached as to some or all of the reasonable fees and costs to be reimbursed to  
15 SFHA under this Section 3.6.1, PG&E shall make such payment within sixty (60) days of the  
16 date of that agreement, using wire instructions in Section 3.6.1.1. In the event the Parties are  
17 unable to reach agreement as to some or all of the fees and costs for which SFHA seeks to be  
18 reimbursed under this Section 3.6.1, then SFHA may submit the matter to the Court for  
19 resolution upon a properly noticed motion.

20           3.6.1.1. Wire Instructions for Gross & Klein: The following, in  
21 combination with the complete account number which shall be provided by SFHA to PG&E,  
22 constitute the wire instructions for Gross & Klein.

- 23                   • Account Name: Gross & Klein LLP
- 24                   • Last Four Digits of Account Number: x3474
- 25                   • Bank: Citibank, 245 Market St., San Francisco, CA 94111
- 26                   • Domestic Routing Number: 321171184
- 27                   • International Swift Code: CITIUS33
- 28

1                   3.6.2. Compliance Monitoring Funds. Within ninety (90) days of the Effective  
2 Date of this Consent Decree, PG&E shall pay the total sum of Four Hundred Thousand Dollars  
3 (\$400,000), using wire instructions in Section 3.6.2.3, into the SF Herring Monitoring Qualified  
4 Settlement Fund (the "QSF"), established by or on behalf of SFHA, as the full and final payment  
5 of attorneys' fees and costs, including expert costs, associated with SFHA's monitoring of  
6 PG&E's compliance with this Consent Decree from the Effective Date through the termination  
7 of this Consent Decree under Section 11.7. SFHA warrants and represents to PG&E that the  
8 QSF is a duly constructed and authorized IRC Section 468B Qualified Settlement Fund, as  
9 defined by Internal Revenue Code Section 468-B and the associated Treasury Reg. 1-468B-1 of  
10 the Internal Revenue Code and is qualified to receive this settlement payment.

11                   3.6.2.1. SFHA shall defend and indemnify PG&E, and hold PG&E  
12 harmless, with respect to any claims, demands, causes of action, rights, suits, obligations, debts,  
13 liabilities, damages, penalties, taxes, charges, losses, costs, expenses, attorneys' fees, expert  
14 fees, of any nature whatsoever, relating to or arising from the formation, administration, or  
15 existence of the QSF or the payment by PG&E into the QSF. Notwithstanding Section 11.7,  
16 SFHA's obligations under this Section 3.6.2.1 shall survive the termination of this Consent  
17 Decree.

18                   3.6.2.2. Except as specifically provided under Section 3.6 and subject  
19 to Section 5.3.15.2, neither SFHA nor its counsel or consultants are entitled to, nor shall they,  
20 seek any additional funds from PG&E for any Compliance Monitoring for work performed by  
21 PG&E under this Consent Decree. "Compliance Monitoring," as used in this Section 3.6.2 and in  
22 Section 5.3.15.2 shall include, without limitation, review and analysis of (a) technical data; (b)  
23 monitoring reports; (c) Remedial Action Completion Reports ("RACRs"); (d) remedial action  
24 plans ("RAPs") and related Regional Board responses; (e) requests for "no further action"  
25 determinations and related Regional Board responses; and (f) review of Notices of Force  
26 Majeure, as described Section 4.11.3.

3.6.2.3. Wire Instructions for QSF: The following, in combination with the complete account number which shall be provided by SFHA to PG&E, constitute the wire instructions for the QSF.

- Account Name: EPTC Custodial Trust Settlement Trust Contribution Account
- Account Number: x8544
- Bank: Union First Market Bank
- Domestic Routing Number: 051403164
- Further Credit Instructions: EPTC FBO – SF Herring Monitoring Qualified Settlement Fund

#### 4. INVESTIGATIVE AND REMEDIAL ACTIONS TO BE TAKEN BY PG&E

4.1. **Result of Compromise.** The actions to be taken by PG&E under this Consent Decree are solely the result of a compromise of this dispute. Consequently, none of the agreements reached herein, or activities contemplated to be undertaken by PG&E pursuant to this Consent Decree, are intended to, nor shall they, have any precedential effect, including, without limitation, with respect to any other soil, soil gas, groundwater, surface water, or sediment investigations and/or remedial actions being undertaken or to be undertaken by or on behalf of PG&E in San Francisco Bay or elsewhere.

4.2. **Investigation, Monitoring, and Reporting in the Hundred-Foot (100') Band.** PG&E shall undertake the work as set forth in this Section 4.2 within the 100' Band.

4.2.1. **Soil Borings.** Based upon understandings reached in negotiating this Consent Decree, PG&E already has taken soil borings in the area from Pier 35 to Jones Street, identified as "UB-01" through "UB-09" on **Exhibit 5**. Said locations formed the basis for the locations for the groundwater grab sampling to be conducted by PG&E under Section 4.2.2.

4.2.2. **Groundwater Grab Samples.** A "groundwater grab" is a single groundwater sample representative of a specific location and depth at a given point in time.

1 PG&E shall complete four additional groundwater grabs at the locations shown on Exhibit 5  
2 and with sample depth intervals specified in "Exhibit 17".

3 4.2.3. Groundwater Monitoring Wells. PG&E shall undertake the following  
4 groundwater sampling in designated existing wells and new groundwater monitoring wells to be  
5 installed pursuant to this Consent Decree:

6 4.2.3.1. Groundwater Monitoring Well Locations. PG&E shall  
7 undertake groundwater sampling in the groundwater monitoring wells that are located, or will be  
8 located, in the locations within the 100' Band, which are identified and described on the maps  
9 attached hereto as "Exhibit 6" and "Exhibit 7" and the table attached hereto as Exhibit 17 (each  
10 well, individually referenced as a "Compliance Well" and, if referencing more than one,  
11 "Compliance Wells") and which shall be constructed per Sections 4.2.3.2 and 4.2.3.3 and  
12 located as close to the Bay as technically feasible.

13 4.2.3.1.1. In the event sediment pore water sampling in the  
14 agreed-upon location(s) adjacent to Fort Mason shown on "Exhibit 8" show(s) Total Trigger  
15 PAHs consistent with MGP residue that exceed 15 µg/L in pore water, then and only then PG&E  
16 shall advance one or more exploratory soil borings in the upland area adjacent to the offshore  
17 sampling point(s) with such exceedance. The depth of the boring(s) will extend down to the  
18 elevation corresponding with the offshore exceedance or deeper. Soil samples will be analyzed  
19 for constituents specified in Section 4.2.3.4. Grab groundwater samples will be collected  
20 adjacent to each boring with sample depth intervals selected in accordance with the protocol  
21 described in Section 4.2.3.2 and 4.2.3.3. If soil samples indicate the presence of MGP residue in  
22 one or more soil samples in the upland area at Fort Mason, and grab groundwater samples  
23 exceed 105 µg/L of the Total Trigger PAHs at the adjacent grab groundwater location, PG&E  
24 shall install a groundwater monitoring well at the location of the grab groundwater sample(s)  
25 with such exceedance in accordance with the 100' Band monitoring well protocol described in  
26 Sections 4.2.3.2 and 4.2.3.3.

27 4.2.3.1.2. In the event that grab groundwater samples exceed  
28 105 µg/L of the Total Trigger PAHs at any of the grab groundwater locations identified on

1 **"Exhibit 5"**, then, and only then, PG&E shall install groundwater monitoring wells at the  
2 location of the grab groundwater sample(s) with such exceedance in accordance with the 100'  
3 Band monitoring well protocol described in Sections 4.2.3.2 and 4.2.3.3.

4 4.2.3.1.3. Notwithstanding the foregoing, installation of the  
5 groundwater monitoring wells in the locations provided for in this Section 4.2.3 is subject to  
6 PG&E's ability to gain access from the property owner, with use of best efforts, for such  
7 installations. In the event such access is not granted, the groundwater monitoring well(s) will be  
8 installed at the nearest accessible location. Except as expressly provided for in this Section 4.2.3,  
9 no other additional groundwater monitoring wells are required to be installed or sampled by  
10 PG&E within the 100' Band under this Consent Decree.

11 4.2.3.2. Screening Depths/Intervals. PG&E shall construct each  
12 groundwater monitoring well or well cluster with the following screened intervals: (a) the first  
13 encountered groundwater; (b) beneath the first encountered fine-grained interval that is ten (10)  
14 inches or greater in thickness and below the interval screened to target first encountered  
15 groundwater, with a maximum targeted well depth between twenty-five (25) feet and thirty (30)  
16 feet below ground surface ("bgs"); provided, however, in the event no such fine-grained interval  
17 is encountered shallower than forty (40) feet bgs, a ten (10) foot screen shall be placed from  
18 thirty (30) feet to forty (40) feet bgs, unless a continuous fine grained interval consistent with  
19 native Bay Mud (i.e. not post-development sediments) is encountered more shallowly than forty  
20 (40) feet bgs that extends to forty (40) feet bgs, in which case a five-foot screened interval shall  
21 be installed immediately above said interval which shall complete the monitoring well; (c) at  
22 any other depths adjacent to identified NAPL, downgradient of NAPL near shore, or, if there is  
23 no room downgradient of NAPL, then within the NAPL. Other than as indicated above, screen  
24 intervals will be five (5) feet in length, unless a different length is needed to achieve any of the  
25 above criteria.

26 4.2.3.3. Well configuration. Wells will not be configured or maintained  
27 in a way that omits the collection of NAPL and/or MGP tar-impacted intervals.  
28



1                               4.2.3.4.     Constituents To Be Sampled. PG&E shall sample and analyze  
2 groundwater in wells within the 100' Band, as shown on Exhibit 6 and Exhibit 7, for GW PAHs  
3 and total extractable petroleum hydrocarbons ("TEPH"), but no other constituents.  
4 Notwithstanding the foregoing, neither Total GW PAHs nor TEPH, alone or in combination,  
5 shall be used as the trigger for any groundwater remedy. Instead, only the Total Trigger PAHs  
6 shall be used to determine whether a groundwater remedy is triggered under this Consent  
7 Decree.

8                               4.2.3.5.     Calculation of Total Trigger PAHs. Total Trigger PAHs shall  
9 be calculated using the concentrations as shown in validated laboratory analytical results, or  
10 laboratory-provided results where data validation is not conducted (the "Laboratory Results")  
11 and in accordance with the following:

12                              4.2.3.5.1.     Laboratory Non-Detects. In the event Laboratory  
13 Results report non-detections ("ND") for any of the Total Trigger PAHs, Total Trigger PAHs  
14 shall be calculated by substituting one-half the reporting limit for each individual Total Trigger  
15 PAH concentration reported as non-detect at the laboratory reporting limit.

16                              4.2.3.5.2.     "J" Qualified Positive Detections. Where "J"  
17 qualified positive detections are provided in the Laboratory Results, those "J" qualified results  
18 will be considered positive detections for the purpose of calculating Total Trigger PAHs. "J"  
19 qualified positive detections," as used in this Section 4.2.3.5.2, means that the particular PAH  
20 concentration is reported as an estimate.

21                              4.2.3.5.3.     Neat Analysis. Samples utilized for Total PAH  
22 Trigger evaluation shall be submitted for undiluted (or "Neat") analysis. In the unlikely situation  
23 where the laboratory is unable to provide undiluted reporting limits or "RLs" (i.e., no Neat  
24 sample), and the RLs cause the trigger exceedance, the well will be resampled as soon as  
25 reasonably achievable at a similar tidal stage, submitted for undiluted (Neat) analysis, and those  
26 results will replace the original results for evaluating whether the remediation trigger has been  
27 exceeded. In this circumstance, concurrent with its transmittal of the quarterly groundwater  
28 monitoring report that includes such sampling event, as set forth in Section 4.2.4, PG&E will

1 provide to SFHA the correspondence from the laboratory explaining why the undiluted sample  
2 results cannot be provided.

3 4.2.3.5.4. Trigger Straddle. Where the concentrations of  
4 primary and duplicate samples straddle a trigger level and field duplicate relative percent  
5 difference ("RPD") goals are met (with goals defined as within 25% for Total Trigger PAHs  
6 rather than individual chemicals), the arithmetic mean concentration of Total Trigger PAHs of  
7 the two (2) samples shall be determined for trigger evaluation under Section 4.3.1. Where  
8 duplicate goals fail, the affected well shall be resampled as soon as reasonably achievable at a  
9 similar tidal stage that the failed duplicates were collected and the resampled results will be used  
10 for trigger evaluation under Section 4.3.1.

11 4.2.3.6. Sampling Frequency. PG&E shall take a single sample per  
12 Compliance Well each quarter, such that in a given year the full tidal cycle is represented. This  
13 will be accomplished by sampling each Compliance Well within a four-quartile range of high to  
14 low tide. This sampling shall be conducted by PG&E according to the following schedules  
15 applicable to the Pre-Remediation Phase, the Remediation Phase, and the Post-Remediation  
16 Phase, respectively and as applicable:

17 4.2.3.6.1. Pre-Remediation Phase. At the initiation of the  
18 investigation following entry of this Consent Decree (the "Pre-Remediation Phase"), PG&E  
19 shall sample Compliance Wells quarterly for eight quarters. If, following the first eight (8)  
20 quarters of groundwater monitoring in a Compliance Well during the Pre-Remediation phase  
21 there is no exceedance of the remediation trigger set forth in Section 4.3.1, then no further  
22 monitoring of such Compliance Well(s) is required and PG&E shall be entitled to seek a no  
23 further action ("No Further Action" or "NFA") determination from the Regional Board, and/or  
24 any other governmental agency with jurisdiction, and shall be entitled to close and  
25 decommission any Compliance Wells that are the subject of an approved NFA.  
26 Notwithstanding anything to the contrary in Section 5, SFHA shall have no right of appeal to the  
27 Panel from the approval of a request for an NFA in this limited circumstance.  
28

1 4.2.3.6.2. Remediation Phase. The schedule for sampling  
2 during the period of remediation (the "Remediation Phase") is described in Section 4.3.3.

3 4.2.3.6.3. Attainment/Post-Remediation Phase. The schedule  
4 for sampling during the period after a remediation is complete (the "Post-Remediation Phase") is  
5 described in Section 4.3.4.

6 4.2.4. Groundwater Well Sampling Result Reporting. For the Term of this  
7 Consent Decree, PG&E shall provide to SFHA, concurrently with PG&E's submittal to the  
8 Regional Board: (a) a copy of each groundwater monitoring report for Compliance Wells in the  
9 100' Band; and (b) copies of any RACR(s) addressing a Compliance Well.

10 4.2.4.1. A RACR shall include. (a) a description of the approved  
11 remedial action; (b) a description of the remedial activities; and (c) a recommendation for further  
12 action, which shall include a recommendation for at least eight (8) quarters of monitoring.

13 **4.3. Remediation in the 100' Band**

14 4.3.1. Groundwater Remedy Triggers. Subject to Section 4.3.2, PG&E shall be  
15 required to evaluate and submit to the Regional Board for approval a RAP to address  
16 groundwater conditions identified in the sampling of the Compliance Wells under Section 4.2.3  
17 only in the following circumstances: (a) where statistically, at the conclusion of eight  
18 consecutive quarters of groundwater monitoring following entry of this Consent Decree,  
19 applying a 95% UCL of the Total Trigger PAHs data collected over those eight consecutive  
20 quarters determined in accordance with the U.S. EPA RCRA Unified Guidance (2009) statistical  
21 analysis, the data for the groundwater Compliance Well show an exceedance of 105 µg/L Total  
22 Trigger PAHs, with each Compliance Well to be separately evaluated; (b) if, after the first  
23 quarter of groundwater monitoring following entry of this Consent Decree, data show an  
24 exceedance of 2500 µg/L Total Trigger PAHs in a Compliance Well and such exceedance is  
25 confirmed through follow-up sampling in the same Compliance Well(s) in which such  
26 exceedance occurred as soon thereafter as reasonably practicable; or (c) if, after the first quarter  
27 of groundwater monitoring following entry of this Consent Decree, data show an exceedance of  
28

1 500 µg/L Total Trigger PAHs but less than 2500 µg/L Total Trigger PAHs in a Compliance  
2 Well, then PG&E shall undertake monthly groundwater monitoring sampling at such  
3 Compliance Well(s), and if seven (7) consecutive monthly samples thereafter in such  
4 Compliance Well(s) show(s) Total Trigger PAHs above 105 µg/L, applying a 95% UCL  
5 determined in accordance with the U.S. EPA RCRA Unified Guidance (2009) statistical  
6 analysis.

7 4.3.2. Development and Proposal of Groundwater Remedial Action or NFA  
8 Request. In the event one or more of the triggering circumstances described in Section 4.3.1  
9 occurs, PG&E shall either develop and propose a RAP to address the identified contamination  
10 for the approval of the Regional Board and consideration by other regulatory agencies with  
11 jurisdiction or request an NFA determination from the Regional Board. PG&E shall be entitled  
12 to evaluate, develop and prepare the RAP and determine the remedy to be proposed in the RAP  
13 in the exercise of its sole and absolute discretion. SFHA shall not be entitled or permitted to  
14 participate in the development or preparation of such RAP(s), except that SFHA may participate  
15 in any public comment process as allowed by the Regional Board and exercise its right to appeal  
16 certain RAP approvals pursuant to Section 5. If the remedy proposed in the RAP explicitly  
17 includes the technically reasonable removal of any Compliance Well, the remedy must also  
18 explicitly address replacement monitoring.

19 4.3.2.1. SFHA Right of Appeal. SFHA shall have a right to appeal to  
20 the Panel, in accordance with Section 5, any approval or grant by the Regional Board or the  
21 State Water Board of: (a) a "Monitoring Only" remedy (as defined in Section 4.3.3.1); (b) an  
22 MNR remedy (as defined in Section 4.8.1), or (c) a request for an NFA determination (except as  
23 set forth in Section 4.2.3.6.1).

24 4.3.3. Implementation of Remedy. Following approval of a proposed RAP by  
25 the Regional Board or the State Water Board, as well as approval by any other regulatory agency  
26 with jurisdiction and resolution of any appeal by SFHA, PG&E shall implement the Approved  
27 RAP.  
28

1                               4.3.3.1.    Monitoring and Reporting During Implementation of a Non-  
2   "Monitoring Only" Remedy within the 100' Band. In the event that a particular remedy  
3 explicitly includes the technically reasonable removal of any Compliance Well, the remedy must  
4 explicitly address replacement monitoring. At the initiation of a "Non-Monitoring Only"  
5 remedy, i.e., a remedy that calls for any actions beyond only further monitoring, then PG&E  
6 shall continue quarterly monitoring from the same Compliance Wells that triggered the remedy  
7 and those immediately adjacent, beginning at the initiation of the remedy and continuing until  
8 the remedy is complete. PG&E shall prepare and provide to the Regional Board and SFHA  
9 quarterly monitoring reports containing the results of the monitoring called for in the Approved  
10 RAP. PG&E shall submit an annual groundwater monitoring report to the Regional Board, to be  
11 sent concurrently to SFHA, which contains the results of such monitoring. Such annual  
12 groundwater monitoring report shall include a request for approval of either further Monitoring  
13 Only, a transition to Post-Remediation Monitoring (as described in Section 4.3.4), or another  
14 remedy. If an additional Monitoring Only Remedy is approved, subject to SFHA's rights of  
15 appeal under Section 5, PG&E shall undertake the monitoring according to the schedule  
16 approved by the Regional Board and submit the annual groundwater monitoring reports to the  
17 Regional Board and concurrently to SFHA. Except for in-situ chemical or biological  
18 remediation, remedy "Completion" for other remedial actions shall be at the time the last  
19 demobilization of contractors associated with the remedy approved in the RAP is undertaken (by  
20 way of example and not limitation, e.g., the completion of excavation and backfilling, or, in the  
21 context of a containment remedy, the completion of construction of the containment remedy).  
22 For in-situ chemical or biological treatment remedies, "Completion" is defined as the time that  
23 in-situ conditions are no longer conducive to the in-situ remediation technique selected for the  
24 remediation, or when remedial action objectives have been met and a request for transition to  
25 Post-Remediation Monitoring is approved by the Regional Board.

26                               4.3.3.2.    Monitoring and Reporting During Implementation of a  
27   "Monitoring Only Remedy." In the event an Approved RAP consists solely of monitoring  
28 ("Monitoring Only Remedy"), PG&E shall implement the monitoring as called for under the

1 Approved RAP. PG&E shall submit an annual groundwater monitoring report to the Regional  
2 Board, to be sent concurrently to SFHA, which contains the results of such monitoring. Such  
3 annual groundwater monitoring report shall include a request for approval of either further  
4 Monitoring Only, an NFA determination, or another remedy. If an additional Monitoring Only  
5 Remedy is approved, subject to SFHA's rights of appeal under Section 5, PG&E shall undertake  
6 the monitoring according to the schedule approved by the Regional Board and submit the annual  
7 groundwater monitoring reports to the Regional Board and concurrently to SFHA.

8 4.3.3.3. SFHA's Right of Appeal. SFHA shall have a right to appeal,  
9 pursuant to Section 5, an approval by the Regional Board of a request by PG&E for approval of  
10 a Monitoring Only Remedy or NFA determination pursuant to this Section 4.3.3, but only as to  
11 those wells that are covered by such approval.

12 4.3.4. Post-Remediation Monitoring. Unless the Approved RAP consists solely  
13 of no less than eight (8) quarters of groundwater monitoring, following the Completion of the  
14 non-Monitoring Only remedial action under Section 4.3.3.1, PG&E shall undertake eight (8)  
15 quarters of groundwater monitoring in the respective Compliance Wells identified in Section  
16 4.3.3.1 in accordance with the protocol described in Sections 4.2.3.2 through 4.2.3.5 ("Post-  
17 Remediation Monitoring"). In the event the Approved RAP consists solely of at least eight (8)  
18 quarters of groundwater monitoring, then no further groundwater monitoring shall automatically  
19 be required upon the completion of such monitoring under Section 4.3.3.2.

20 4.3.5. Post-Remediation Reporting Obligations. PG&E shall report the results of  
21 its Post-Remediation Monitoring in an annual report to be submitted to the Regional Board with  
22 a concurrent copy to SFHA.

23 4.3.5.1. Timing of Annual Reports. PG&E shall issue such annual  
24 reports promptly after the eight (8) quarters of Post-Remediation Monitoring required under  
25 Section 4.3.4 are satisfied for the respective Compliance Wells, and then every year thereafter  
26 for the Term of this Consent Decree until an NFA determination is approved by the Regional  
27 Board or State Water Board for the respective Compliance Wells and becomes "final." For  
28 purposes of this Consent Decree, a Regional Board or State Water Board determination or

1 approval is "final" if the determination or approval is not appealed to the Panel under Section 5,  
2 or, if the determination or approval is appealed, the appeal does not result in the Panel's rejection  
3 of the Board approval or determination pursuant to the process set forth in Section 5.

4 4.3.5.2. Required Alternative Proposals In Annual Reports. In the  
5 annual reports, PG&E shall propose one of the following three options to the Regional Board:  
6 (a) additional remedial action; (b) further Monitoring Only; or (c) a request for an NFA  
7 determination.

8 4.3.5.2.1. SFHA's Right of Appeal. SFHA shall have a right  
9 to appeal to the Panel, in accordance with Section 5, any approval or grant by the Regional  
10 Board or the State Water Board of a request made by PG&E for approval of a Monitoring Only  
11 Remedy or a request for an NFA determination pursuant to Section 4.3.5.2, but only as to such  
12 Compliance Wells that are covered by such approval or determination.

13 4.3.5.3. Non-MGP Residue. In the event PG&E concludes during the  
14 groundwater sampling and analyses undertaken pursuant to Section 4.3 that identified PAH  
15 contamination in a sampled Compliance Well is not consistent with MGP residue, then PG&E  
16 shall request approval of an NFA determination from the Regional Board as to such well.

17 4.3.5.3.1. SFHA's Right to Appeal. SFHA shall have a right  
18 to appeal to the Panel, in accordance with Section 5, any approval by the Regional Board or the  
19 State Water Board of an NFA determination pursuant to Section 4.3.5.3.

20 4.3.6. No SFHA Right of Appeal. Notwithstanding anything to the contrary  
21 herein, SFHA shall have no right of appeal to the Panel in regards to the 100' Band in the  
22 following other circumstances:

23 4.3.6.1. where, other than in association with a request for Monitoring  
24 Only included in an annual report the Regional Board approves a proposal for continued  
25 monitoring contained in a quarterly monitoring report;

26 4.3.6.2. where the Regional Board approves a proposal for continued  
27 monitoring contained in an annual report issued during the first eight (8) quarters of monitoring  
28 during the Pre-Remediation Phase pursuant to Section 4.2.3.6.1;

1                   4.3.6.3.     where the Regional Board approves a request for an NFA  
2 determination following the first eight (8) quarters of monitoring during the Pre-Remediation  
3 pursuant to 4.2.3.6.1 when there has been no exceedance under Section 4.3.1 at the groundwater  
4 monitoring wells that are the subject of the NFA;

5                   4.3.6.4.     where the Regional Board approves a proposal for continued  
6 monitoring in a groundwater monitoring report issued during the first eight (8) quarters of  
7 monitoring following the completion of a non-Monitoring Only remedy under Section 4.3.3; and

8                   4.3.6.5.     where the sole basis for appeal of a Monitoring Only remedy  
9 or NFA determination would be that PAH concentrations in groundwater monitoring wells  
10 either upgradient of or within a containment remedy, if sampled, continue to exceed the remedy  
11 trigger. Containment remedies are designed to contain, and not to remove or reduce,  
12 groundwater with PAH concentrations exceeding the groundwater remedy trigger. Whether a  
13 containment remedy is effective shall be based upon other factors, including without limitation,  
14 water levels, evidence indicating there is no communication of groundwater with the Bay in the  
15 subject area, and any sentry wells installed as a part of the containment remedy, as justified in  
16 the Board approved remedy plan.

17           4.4.     **Offshore Investigation.** PG&E shall undertake the work as set forth in this  
18 Section 4.4 within the offshore area defined in Section 4.4.1.

19                   4.4.1.   Offshore Investigation – Bayward and Lateral Extent. PG&E shall  
20 conduct the bayward and lateral delineation of MGP-related impacts in the following areas:

21                           4.4.1.1.   Bayward Extent. The bayward extent of the offshore  
22 investigation required under this Section 4.4 shall extend from the mean high tide line and  
23 continue bayward until the bayward extent of contamination consistent with MGP residue has  
24 been reached, subject to any physical or safety considerations that would present unreasonable  
25 risks.

26                           4.4.1.2.   Lateral Extent Relative to Shoreline. The lateral extent of the  
27 offshore investigation required under this Section 4.4 relative to the shoreline shall be as  
28 follows, unless the lateral extent of contamination consistent with MGP residue relative to the



shoreline is reached prior to the limits identified below (in which case the lateral extent shall terminate at such location):

4.4.1.2.1. Limits in the Marina. From Lyons Street (western limit) to Van Ness Avenue (eastern limit).

4.4.1.2.1.1. West Harbor. Within the West Harbor (as defined in Section 4.10), but PG&E shall only be required to conduct passive sampling, in the manner and locations described in Section 4.10 and as shown on "**Exhibit 16**".

4.4.1.2.2. Limits in Pier 39 to Pier 45. From Pier 45 (western limit) to Pier 35 (eastern limit).

4.4.2. Offshore Investigation-Vertical Extent. PG&E shall conduct the vertical delineation of MGP-related impacts to practicable limits presented by safety considerations, as determined by a competent person (as defined by OSHA Regulation, 29 C.F.R. 1926.32(f)) performing the work, to sediment depths targeted to twenty-five (25) feet below sediment surface ("bss"), and no less than twenty (20) feet bss; provided, however, that if NAPL consistent with MGP residue is encountered at the lowest sampling depth in a boring location then PG&E shall use TarGOST to continue its vertical delineation until NAPL is no longer present.

#### 4.4.3. Offshore Investigation – Boring Locations

4.4.3.1. Marina. Sampling will be conducted at the locations identified on the map attached hereto as "**Exhibit 9**" (the "New Marina OS Locations"). The sampling for new Marina OS Locations adjacent to the Marina Green Seawall will be located bayward of the seawall apron extending approximately seventy-five (75) feet from the seawall.

4.4.3.1.1. In the event the bayward extent of contamination consistent with MGP residue has not been reached within the boundaries of the New Marina OS Locations, further sampling, extending beyond the New Marina OS Locations, will be undertaken on an iterative basis until the bayward extent contamination consistent with MGP residue is identified, at which time the outer limits of the MGP residue offshore of the Marina

1 will be deemed to have been identified and PG&E shall not be required to undertake any  
2 investigation or sampling further bayward of the Marina.

3 4.4.3.1.2. In this iterative process, the first bayward step-outs  
4 from the New Marina OS Locations would be no more than fifty (50) feet bayward of the first  
5 row of sampling locations; the next step-out distance would be no more than one hundred (100)  
6 feet bayward from the first step-out sample locations (one hundred and fifty (150) feet bayward  
7 from the first row); and any further step-outs would be no more than one hundred and fifty (150)  
8 feet bayward from the previous step-out locations (three hundred (300) feet bayward from the  
9 first row, then four hundred and fifty (450) feet, etc.). Any bayward step-outs would be  
10 staggered, with one sampling location approximately seventy-five (75) feet to the west of the  
11 triggering location and one sampling location approximately seventy-five (75) feet to the east of  
12 the triggering location. Any lateral step-outs would be one hundred and fifty (150) feet to east  
13 and/or west of the prior step-out location as appropriate, subject to the boundary limitations set  
14 forth in Section 4.4.1. (An illustrative example of the step-out scenarios is depicted in "**Exhibit**  
15 **10**".)

16 4.4.3.2. Fort Mason. Sampling will be conducted at the locations  
17 identified on the map attached hereto as **Exhibit 8**.

18 4.4.3.3. Pier 35 to Pier 45. PG&E previously conducted sediment  
19 sampling in the offshore area between Pier 35 and Pier 45. In lieu of undertaking additional pore  
20 water and sediment core sampling in this area, PG&E may instead apply a surrogate predictive  
21 pore water equivalent ("PWeq") to evaluate whether any remedy is required, to be developed in  
22 accordance with the protocol set forth in "**Exhibit 11**". The formula(s) (the "PWeq Formula(s)")  
23 will then be applied to existing data from bulk sediment sampling in other areas of Pier 35 to  
24 Pier 45 to generate PWeq values for those locations. Notwithstanding the foregoing, PG&E  
25 reserves the right, in its sole and absolute discretion, to collect and analyze actual pore water  
26 samples—in accordance with the protocol described in **Exhibit 12**—in lieu of applying the  
27 PWeq. In addition, in all instances where PWeq is applied, PG&E shall have the right to take  
28 confirmatory pore water samples, in accordance with the protocol described in **Exhibit 12**. In

1 that event, the Laboratory Results from such confirmatory samples would be used to determine  
2 whether a remedy is required under Section 4.7, and not the PWeq (i.e., actual measurements  
3 will supersede the PWeq predictive analysis).

4 4.4.3.3.1. East Harbor. PG&E already has undertaken  
5 extensive sampling in the area known as the East Harbor, which is shown on the map attached  
6 hereto as "**Exhibit 13**". It is contemplated that the East Harbor area, which is owned and  
7 operated by CCSF through its Recreation and Parks Department, will be remediated in  
8 coordination with CCSF's renovation or reconfiguration of the East Harbor marina. Contingent  
9 upon such remediation occurring, PG&E is not required by this Consent Decree to conduct any  
10 pre-remediation sampling in East Harbor, but shall undertake post-remedial sampling and  
11 monitoring, depending upon the nature of the remedy or remedies implemented in the East  
12 Harbor, in accordance with Section 4.9. In the event the East Harbor is not remediated in  
13 coordination with CCSF's anticipated renovation or reconfiguration of the East Harbor marina,  
14 then PG&E shall grid or subdivide the area into five (5) sampling locations, with spacing no less  
15 than approximately fifty (50) feet and no greater than approximately one hundred fifty (150)  
16 feet. In the event such minimum approximately fifty (50) foot spacing cannot be achieved, the  
17 total number of sample locations may be reduced as needed to achieve such minimum spacing,  
18 except, in all events, a minimum of two (2) samples will be taken. In the event that such  
19 maximum approximately one hundred and fifty (150) foot spacing would be exceeded if only  
20 five (5) sampling locations were used, additional sampling locations shall be added as necessary  
21 so as not to exceed such maximum spacing. From all of the sample locations, PG&E shall  
22 collect and analyze pore water in accordance with the sampling protocol set forth in **Exhibit 12**  
23 and Section 4.5 at three depths—zero to half (0-0.5) a foot bss, one to one and one-half (1-1.5)  
24 feet bss, and two to three (2-3) feet bss; co-located bulk sediment may also be collected and  
25 analyzed. Alternatively, PG&E may apply the PWeq, established under Section 4.4.3.3 and  
26 **Exhibit 11** to bulk sediment samples already taken from the East Harbor.

27 4.4.3.4. Non-MGP Residue. In the event that PG&E finds PAH  
28 contamination during the iterative offshore investigation called for by this Section 4.4, but

determines that the contamination in an offshore area is not consistent with MGP Residue, PG&E shall request an NFA Determination from the Regional Board for said area.

4.4.3.4.1. SFHA's Right to Appeal. SFHA shall have a right to appeal to the Panel, in accordance with Section 5, any approval by the Regional Board or the State Water Board of an NFA determination requested by PG&E pursuant to Section 4.4.3.4.

4.5. **Offshore Investigation – Sampling Protocol and Methods**

4.5.1. Pore Water Sampling Protocol. All pore water samples taken pursuant to this Consent Decree shall follow the sampling protocol set forth in **Exhibit 12**.

4.5.2. New Boring Sampling Methodology.

4.5.2.1. Bulk Sediment Core Samples. For every new boring conducted following entry of this Consent Decree, lateral and vertical delineation of MGP-related impacts will be delineated by taking continuous bulk sediment cores using a sampling depth penetration target of twenty to twenty-five (20 to 25) feet bss, with a best effort to achieve a minimum sampling depth of twenty (20) feet bss or as close thereto as possible in the event of refusal, and bulk sediment cores shall be sub-sampled: (a) in co-location with any pore water samples taken from the first three (3) feet bss; and (b) every two (2) feet thereafter below three (3) foot depth bss, biased to field observations of potential MGP impacts and/or lithological contacts.

4.5.2.1.1. A "best effort" to recover a nominal twenty (20) foot sediment core (adjusted for recovery) at a planned or step-out station will be defined as attempting up to three borings within a twenty (20) foot radius. Failing to recover a nominal twenty (20) foot sediment core, the longest sediment core will be selected for subsampling as described herein, unless a shorter sediment core yields observations of potential MGP residual-impacts (NAPL, sheen or odors) that are not observed in the longest core. In such cases, the core with the greatest vertical extent of the impacts will be selected. In any case, the planned or step-out station will be relocated approximately fifty (50) feet in the step-out direction (e.g., **Exhibit 10**) to attempt to obtain the nominal twenty (20) foot sediment core recovery. Up to three more attempts within a twenty (20) foot radius of the relocated station will complete the "best effort"

1 to achieve the vertical delineation objective, and the same procedure will be used to determine  
2 the core selected for sampling. PG&E is not required to attempt any additional borings, beyond  
3 the six described herein, to achieve the vertical delineation objective for a planned or step-out  
4 station. In addition, no more than two borings are required to be subsampled for chemical  
5 analysis as described in Sections 4.5.2.1, 4.6.1, and 4.6.2. Field observations of potential MGP  
6 impacts in the cores not retained for subsampling will be documented with respect to depth  
7 interval, adjusted for recovery.

8 4.5.2.2. Pore Water Samples. Pore water samples will be taken at three  
9 depth intervals—zero to half (0-0.5) a foot bss, one to one and half (1-1.5) feet bss, and two to  
10 three (2-3) feet bss—using an in situ low flow piezometer method as described in **Exhibit 12**;  
11 PWeq will be applied to sediment depths greater than three (3) feet bss.

12 4.5.2.3. Deep NAPL. For every new boring conducted following entry  
13 of this Consent Decree, if NAPL consistent with MGP residue is encountered in a boring  
14 location and extends to or beyond the terminus of the boring, TarGOST will be employed to  
15 determine the full vertical extent of such NAPL.

16 4.5.2.4. Except as required as part of any remediation plan or in  
17 accordance with the Offshore Investigation in Section 4.4.3 or the PWeq study detailed in  
18 **Exhibit 11** or the post-remedial monitoring obligations described in Section 4.8 and contingent  
19 upon PG&E's application of PWeq to the results of such previously taken samples, PG&E shall  
20 not be required to re-sample any offshore locations at which bulk sediment samples already had  
21 been taken prior to entry of this Consent Decree.

#### 22 4.6. **Offshore Investigation – Sample Analyses**

23 4.6.1. PAH Analysis of Pore Water and Bulk Sediment Cores. Pore water  
24 samples and bulk sediment cores will be analyzed for Sediment/Pore Water PAHs.  
25 "Sediment/Pore Water PAHs" shall mean those PAHs identified on the list of approximately  
26 eighty (80) constituents being analyzed under PG&E's current sediment sampling program, as  
27 shown on **Exhibit 14**. Notwithstanding the foregoing, Sediment/Pore Water PAHs shall not be  
28

1 used as the trigger for any remedy or Chemical Performance Standard. Instead, only Total  
2 Trigger PAHs shall be used for those purposes, in accordance with Section 4.10. The PAHs  
3 included in "Total Trigger PAHs" for sediment pore water are the thirty-four (34) alkyl and  
4 parent PAH compounds that are included in U.S. EPA's PAH-34 list (**Exhibit 4**).

5 4.6.2. Supplemental Constituent Analysis of Bulk Sediment Cores. The  
6 following supplemental constituents will be sampled for in bulk sediments, but shall not be a  
7 trigger for a remedy under this Consent Decree: BTEX, styrene, carbon disulfide, and  
8 naphthalene using U.S. EPA Method 8260, and TEPH using U.S. EPA Methods 8015/8100 or  
9 equivalent (collectively, "Supplemental Constituents").

10 4.6.3. Non-Filtration of Pore Water Sample. PG&E shall not field filter pore  
11 water samples. Upon its submittal of the samples to the analytical laboratory, PG&E will direct  
12 that the pore water samples not be filtered, and that the laboratory, instead, flush from pore  
13 water samples visual particles that have settled in a separatory funnel.

14 4.6.4. Trigger Straddle. Where the concentrations of primary and duplicate  
15 samples straddle a trigger level and field duplicate relative percent difference ("RPD") goals are  
16 met (with goals defined as within 25% for Total Trigger PAHs rather than individual chemicals),  
17 the arithmetic mean concentration of Total Trigger PAHs of the two (2) samples shall be  
18 determined for evaluation of whether a remedy has been triggered under Section 4.7. Where  
19 duplicate goals fail, the higher concentration pore water sample shall be used for evaluation of  
20 whether a remedy has been triggered under Section 4.7, unless PG&E resamples the affected  
21 station within sixty (60) days after receipt of the draft laboratory data, in which case the  
22 resampled results will be used for evaluation of whether a remedy has been triggered under  
23 Section 4.7.

24 4.7. **Offshore Investigation – Remedy Triggers and Areas**

25 4.7.1. Offshore Areas Subject To Potential Remedy. The offshore areas that are  
26 subject to potential remedial action by PG&E pursuant this Section 4.7 include only those  
27  
28

1 offshore areas that are co-extensive with the offshore areas of Pier 35 to Pier 45 and the Marina  
2 that are to be investigated pursuant to Section 4.4.

3 4.7.2. Total Trigger PAHs in Pore Water Remedy Trigger. PG&E shall propose  
4 a remedy in accordance with Section 4.8.1 if Total Trigger PAHs from pore water extracted  
5 from the first three (3) feet of a sampling location exceed 15 µg/L, as reported in the Laboratory  
6 Results, in accordance with Section 4.6.

7 4.7.3. PWeq Remedy Trigger. Subject to PG&E's rights to take confirmatory  
8 pore water samples under Section 4.7.3.1, if the PWeq is being applied, PG&E shall propose a  
9 remedy in accordance with Section 4.8.1 if the PWeq of bulk sediment cores from the first three  
10 (3) feet exceed 15 µg/L using the statistical analysis for PWeq developed in accordance with

11 **Exhibit 11**.

12 4.7.3.1. Right to Take and Analyze Confirmatory Pore Water Samples.  
13 Following any application of the PWeq, PG&E shall have the right, but not the obligation, to  
14 take and analyze confirmatory pore water samples pursuant to the sampling and analytical  
15 protocols and methodologies described in Sections 4.5 and 4.6 and exhibits referenced therein. If  
16 such confirmatory samples are taken, the Laboratory Results from such samples would be used  
17 (i.e., actual measurements would supersede predictive analysis), in determining whether a  
18 remedy has been triggered for such location(s) in accordance with this Section 4.7.

19 4.7.4. MGP Contamination Identified Below Three Feet Below Sediment  
20 Surface. If Total Trigger PAHs consistent with MGP residue and at levels above the PWeq  
21 developed in accordance with **Exhibit 11** are identified at sediment depths below three (3) feet  
22 bss, in a location where a remedy has not been triggered under Section 4.10, then PG&E will  
23 include such area in a sediment management plan to be provided to the owner of such location,  
24 with copies to all agencies participating in the Dredged Material Management Office  
25 ("DMMO") in the San Francisco Bay area and to SFHA. The sediment management plan shall  
26 include "Upset Event" bathymetry (as defined herein). PG&E shall include with the sediment  
27 management plan a transmittal letter that includes a high-level summary of the management plan  
28 and a map showing covered areas.

1           **4.8. Offshore Remedy – Selection and Implementation.**

2           4.8.1. PG&E Remedy Proposal. In the event a sediment remedy is triggered  
3 under Section 4.7 for a location or locations subject to the offshore investigation under Section  
4 4.4, PG&E shall either (1) submit a RAP to the Regional Board for each respective area at which  
5 a remedy has been triggered that fall(s) into one or a combination of the following four remedy  
6 categories: (a) removal of all sediment consistent with MGP from the location(s) (the "All  
7 Residue Removed Remedy"); (b) coverage of sediment containing contamination consistent  
8 with MGP residue by an engineered cap (which includes, without limitation, capping with clean  
9 sand and/or amended sand, and armoring as warranted) (the "Engineered Cap Remedy"); (c)  
10 addressing sediment containing contamination consistent with MGP residue using an engineered  
11 solution other than a cap (the "Other Engineered Solution Remedy"); or (d) monitoring of  
12 natural processes ("Monitored Natural Recovery Remedy" or "MNR Remedy"); or (2) request a  
13 No Further Action determination from the Regional Board for an investigated offshore area  
14 regardless of an exceedance of the remedy trigger. Without prejudice to any right of SFHA to  
15 appeal an approval of an NFA, monitoring-only, or MNR-remedy based on the consideration  
16 thereof, PG&E shall have the right, but not the obligation to consider the Surface Weighted  
17 Average Concentration ("SWAC") of Total Trigger PAHs in a proposed remedial action area in  
18 the development of a remedy for said area.

19           4.8.1.1. Non-MGP Residue. In the event PG&E finds that PAH  
20 contamination in an offshore area subject to investigation under Section 4.4 is not consistent  
21 with MGP Residue, PG&E shall request an NFA Determination from the Regional Board for  
22 that area.

23           4.8.1.2. SFHA's Right to Appeal. SFHA shall have a right to appeal to  
24 the Panel, in accordance with Section 5, any approval by the Regional Board or the State Water  
25 Board of an MNR Remedy or NFA determination requested by PG&E pursuant to Section 4.8.1.

26           4.8.2. Implementation of RAP. Following the approval of a RAP and the  
27 resolution of any appeal by SFHA, PG&E shall then implement the RAP, as approved by the  
28 Regional Board or the State Water Board.



1                   4.9.     **Offshore – Post Remediation Compliance Monitoring and Reporting**

2                   4.9.1.   All Residue Removed Remedy. In the event that a RAP providing for an  
3 All Residue Removed Remedy is approved and implemented by PG&E, PG&E shall perform  
4 post-remedial compliance testing, which shall be limited to the Chemical Performance Standard  
5 Testing and bathymetry, within a reasonable time following dredging as follows:

6                             4.9.1.1.   Bathymetry Testing. PG&E shall conduct bathymetry testing  
7 once following the completion of dredging to verify dredge elevations.

8                             4.9.1.2.   Chemical Performance Standard Testing.

9                                     4.9.1.2.1.   Sample Locations Within Dredge Prism. PG&E  
10 will grid or subdivide the dredge prism into five (5) sampling locations, with spacing no less  
11 than approximately fifty (50) feet and no greater than approximately one hundred and fifty (150)  
12 feet. In the event such minimum approximately fifty (50) foot spacing cannot be achieved, the  
13 total number of sample locations may be reduced as needed to achieve such minimum spacing,  
14 except, in all events, a minimum of two (2) samples will be taken. In the event that such  
15 maximum approximately one hundred and fifty (150) foot spacing would be exceeded if only  
16 five (5) sampling locations were used, additional sampling locations shall be added as necessary  
17 so as not to exceed such maximum spacing.

18                                     4.9.1.2.2.   Sample Collection and Analysis Within the Dredge  
19 Prism. From all of the sample locations described in Section 4.9.1.2.1, PG&E will collect and  
20 analyze pore water in accordance with the sampling protocol set forth in **Exhibit 12** at three  
21 depths—zero to half (0-0.5) a foot bss, one to one and a half (1-1.5) feet bss, and two to three (2-  
22 3) feet bss; co-located bulk sediment may also be collected and analyzed.

23                                     4.9.1.2.3.   Sample Locations Along Dredge Perimeter  
24 Boundary. PG&E will subdivide the perimeter boundary of the dredged area, extending  
25 approximately fifty (50) feet beyond the dredged area, into a minimum of five (5) sampling  
26 locations, with spacing no less than approximately fifty (50) feet and no greater than  
27 approximately one hundred and fifty (150) feet. In the event that such minimum fifty (50) foot  
28

1 spacing cannot be achieved, the total number of sample locations may be reduced as needed to  
2 achieve such spacing, except, in all events, a minimum of two (2) samples will be taken. In the  
3 event such maximum approximately one hundred and fifty (150) foot spacing would be  
4 exceeded if only five (5) sampling locations were used, additional sampling locations shall be  
5 added as necessary so as not to exceed such maximum spacing.

6 4.9.1.2.4. Sample Collection and Analysis Along Dredge  
7 Perimeter. From all of the sample locations described in Section 4.9.1.2.3, PG&E will collect  
8 and analyze pore water in accordance with the sampling protocol set forth in **Exhibit 12** at two  
9 depths—zero to half (0-0.5) a foot bss and one to one and a half (1-1.5) feet bss—using an in  
10 situ low flow piezometer method to evaluate potential impacts of dredging residuals settling  
11 beyond the dredge prism; co-located bulk sediment may also be collected and analyzed.

12 4.9.1.3. Reporting and Consequence of Testing Results. Following  
13 completion of the testing described Sections 4.9.1.1 and 4.9.1.2—which shall occur only once,  
14 following completion of dredging—PG&E shall submit a RACR to the Regional Board, with a  
15 copy to SFHA, which shall include a description of the remedial action, sampling results, and a  
16 recommendation for further action, monitoring or an NFA determination.

17 4.9.1.3.1. SFHA's Right to Appeal. SFHA shall have a right  
18 to appeal to the Panel, in accordance with Section 5, any approval by the Regional Board or the  
19 State Water Board of a monitoring only or MNR Remedy, or NFA determination recommended  
20 by PG&E pursuant to Section 4.9.1.3.

21 4.9.2. Engineered Cap Remedy. In the event a RAP providing for an Engineered  
22 Cap Remedy is approved and implemented by PG&E, PG&E shall perform Engineered Cap  
23 Integrity Testing and Chemical Performance Standard Testing, in the first (1<sup>st</sup>), second (2<sup>nd</sup>),  
24 third (3<sup>rd</sup>), and fifth (5<sup>th</sup>) years following the completion of construction of the engineered cap as  
25 follows:

26 4.9.2.1. Engineered Cap Integrity Testing. Engineered Cap Integrity  
27 Testing shall consist of performing bathymetry of the cap area, and testing for cap thickness.  
28

1 4.9.2.1.1. Bathymetry and Cap Thickness Measurement.

2 PG&E will perform bathymetry in the cap area, extending approximately fifty (50) feet outside  
3 the cap geometry, and will include in its work verification of any dredge elevations.

4 4.9.2.1.2. Cap Thickness Measurement. PG&E will measure  
5 supplemental cap thickness in the cap area. PG&E may use settlement plates or direct  
6 measurement of cap thickness as the depth of sediment above the armor/isolation/reactive  
7 material layer. Engineered cap designs will typically anticipate accretion of a habitat layer  
8 approximately six (6) to twelve (12) inches.

9 4.9.2.1.3. Upset Event. In the event of an Upset Event, PG&E  
10 will undertake additional monitoring of cap integrity (bathymetry and any measurement of cap  
11 thickness) in accordance with Sections 4.9.2.1.1 and 4.9.2.1.2.

12 4.9.2.2. Chemical Performance Standard Testing. PG&E shall sample  
13 pore water within the capped area and the cap's perimeter boundary as follows:

14 4.9.2.2.1. Sample Locations In the Cap Area. PG&E will grid  
15 or subdivide the cap area into five (5) sampling locations, with spacing no less than  
16 approximately fifty (50) feet and no greater than approximately one hundred fifty (150) feet. In  
17 the event such minimum approximately fifty (50) foot spacing cannot be achieved, the total  
18 number of sample locations may be reduced as needed to achieve such minimum spacing,  
19 except, in all events, a minimum of two (2) samples will be taken. In the event that such  
20 maximum approximately one hundred and fifty (150) foot spacing would be exceeded if only  
21 five (5) sampling locations were used, additional sampling locations shall be added as necessary  
22 so as not to exceed such maximum spacing.

23 4.9.2.2.2. Collection and Analysis of Pore Water In Cap  
24 Area. PG&E shall collect and analyze pore water within the zone from the top of the cap  
25 reactive/isolation/armor layer to approximately six (6) inches above the top of said area, in  
26 accordance with the protocol set forth in **Exhibit 12**. PG&E may also collect and analyze co-  
27 located bulk sediment cores.

28

1 4.9.2.2.3. Sample Locations Within Cap Perimeter Boundary.  
2 PG&E shall subdivide a perimeter boundary extending approximately fifty (50) feet beyond the  
3 capping footprint into a minimum of five (5) sampling locations, with spacing no less than  
4 approximately fifty (50) feet and no greater than approximately one hundred and fifty (150) feet.  
5 In the event that such minimum fifty (50) foot spacing cannot be achieved, the total number of  
6 sample locations may be reduced as needed to achieve such spacing, except, in all events, a  
7 minimum of two (2) samples will be taken. In the event such maximum approximately one  
8 hundred and fifty (150) foot spacing would be exceeded if only five (5) sampling locations were  
9 used, additional sampling locations shall be added as necessary so as not to exceed such  
10 maximum spacing.

11 4.9.2.2.4. Collection and Analysis of Pore Water Within the  
12 Cap Perimeter Boundary. Within the perimeter boundary, PG&E shall collect and analyze pore  
13 water in accordance with the sampling protocol set forth in **Exhibit 12** at three depths in each  
14 area—zero to half (0-0.5) a foot bss, one to one and half (1-1.5) feet bss, and two to three (2-3)  
15 feet bss. PG&E may also collect and analyze co-located bulk sediment cores.

16 4.9.2.3. Reporting and Consequence of Testing Results. Following  
17 completion of the cap construction, PG&E shall submit a RACR, which shall include a  
18 description of the remedial action, to the Regional Board with a copy to SFHA. Following each  
19 sampling event, PG&E shall submit to the Regional Board with a copy to SFHA, a monitoring  
20 report, which shall include sampling results, and a recommendation for continued monitoring,  
21 adaptive maintenance, another remedy, or, in the case of sampling that occurs in the fifth (5<sup>th</sup>)  
22 year after construction of the cap, an NFA determination.

23 4.9.2.3.1. SFHA's Right to Appeal. SFHA shall have a right  
24 to appeal to the Panel, in accordance with Section 5, any approval by the Regional Board or the  
25 State Water Board of a monitoring only or MNR Remedy or NFA determination recommended  
26 by PG&E pursuant to Section 4.9.2.3.

27 4.9.3. Other Engineered Solution Remedy. In the event that a RAP providing for  
28 an Other Engineered Solution Remedy is approved and implemented by PG&E, PG&E shall

1 only be required to perform Chemical Performance Standard Testing and Upset Event testing.  
2 The frequency of the Chemical Performance Standard Testing will be dependent upon the  
3 particular engineered solution remedy implemented, but in no event shall such testing be  
4 performed less than once, nor shall it occur more frequently than after construction and then the  
5 first (1<sup>st</sup>), second (2<sup>nd</sup>), third (3<sup>rd</sup>), and fifth (5<sup>th</sup>) years following completion of construction of  
6 the remedy.

7 4.9.3.1. Chemical Performance Standard Testing. PG&E shall sample  
8 pore water within the area of the Other Engineered Solution Remedy and the remedy area's  
9 perimeter boundary as follows:

10 4.9.3.1.1. Sample Locations Within the Remedy Area. PG&E  
11 will grid or subdivide the remedy area footprint into a minimum of five (5) sampling locations,  
12 with spacing no less than approximately fifty (50) feet and no greater than approximately one  
13 hundred fifty (150) feet. In the event such minimum approximately fifty (50) foot spacing  
14 cannot be achieved, the total number of sample locations may be reduced as needed to achieve  
15 such minimum spacing, except, in all events, a minimum of two (2) samples will be taken. In the  
16 event that such maximum approximately one hundred and fifty (150) foot spacing would be  
17 exceeded if only five (5) sampling locations were used, additional sampling locations shall be  
18 added as necessary so as not to exceed such maximum spacing.

19 4.9.3.1.2. Sample Locations Along Remedy Perimeter  
20 Boundary. PG&E will subdivide a perimeter boundary of the remedy area, extending a  
21 maximum of fifty (50) feet beyond the remedial response footprint, into a minimum of five (5)  
22 sampling locations, with spacing no less than approximately fifty (50) feet and no greater than  
23 approximately one hundred and fifty (150) feet. In the event that such minimum fifty (50) foot  
24 spacing cannot be achieved, the total number of sample locations may be reduced as needed to  
25 achieve such spacing, except, in all events, a minimum of two (2) samples will be taken. In the  
26 event such maximum approximately one hundred and fifty (150) foot spacing would be  
27 exceeded if only five (5) sampling locations were used, additional sampling locations shall be  
28 added as necessary so as not to exceed such maximum spacing.

1 4.9.3.1.3. Collection and Analysis In All Locations. From all  
2 of the sample locations described in Sections 4.9.3.1.1 and 4.9.3.1.2, PG&E will collect and  
3 analyze pore water in accordance with the sampling protocol set forth in Exhibit 12 at three  
4 depths—zero to half (0-0.5) a foot bss one to one and half (1-1.5) feet bss, and two to three (2-3)  
5 feet bss; co-located bulk sediment may also be collected and analyzed.

6 4.9.3.2. Upset Event. In the event of an Upset Event, PG&E will  
7 undertake bathymetry testing in the area of the Other Engineered Solution.

8 4.9.3.3. Reporting and Consequence of Testing Results. Following  
9 completion of construction of the Other Engineered Solution, PG&E shall submit a RACR,  
10 which shall contain a description of the remedial activities. Following each sampling event,  
11 PG&E shall submit to the Regional Board, with a copy to SFHA, a monitoring report, which  
12 shall include sampling results, and a recommendation for continued monitoring, adaptive  
13 maintenance, another remedy, or an NFA determination.

14 4.9.3.3.1. SFHA's Right to Appeal. SFHA shall have a right  
15 to appeal to the Panel, in accordance with Section 5, any approval by the Regional Board or the  
16 State Water Board of a monitoring only or MNR Remedy or NFA determination recommended  
17 by PG&E pursuant to Section 4.9.3.3.

18 4.9.4. Monitored Natural Recovery (MNR) Remedy. In the event that a RAP  
19 providing for an MNR is approved and implemented by PG&E, PG&E shall perform, within a  
20 reasonable time following approval of an MNR remedy, and in the first (1<sup>st</sup>), second (2<sup>nd</sup>), third  
21 (3<sup>rd</sup>), and fifth (5<sup>th</sup>) years following said approval, Chemical Performance Standard Testing and  
22 bathymetry as follows:

23 4.9.4.1. Chemical Performance Standard Testing.

24 4.9.4.1.1. Sample Locations Within the MNR Footprint.  
25 PG&E will grid or subdivide the MNR footprint into a minimum of five (5) sampling locations,  
26 with spacing no less than approximately fifty (50) feet and no greater than approximately one  
27 hundred fifty (150) feet. In the event such minimum approximately fifty (50) foot spacing  
28 cannot be achieved, the total number of sample locations may be reduced as needed to achieve

1 such minimum spacing, except, in all events, a minimum of two (2) samples will be taken. In the  
2 event that such maximum approximately one hundred and fifty (150) foot spacing would be  
3 exceeded if only five (5) sampling locations were used, additional sampling locations shall be  
4 added as necessary so as not to exceed such maximum spacing.

5 4.9.4.1.2. Sample Locations Along MNR Perimeter  
6 Boundary. As part of the year one monitoring event only, PG&E will subdivide a perimeter  
7 boundary of the MNR footprint, extending approximately fifty (50) feet beyond the remedial  
8 response footprint, into a minimum of five (5) sampling locations, with spacing no less than  
9 approximately fifty (50) feet and no greater than approximately one hundred and fifty (150) feet.  
10 In the event that such minimum fifty (50) foot spacing cannot be achieved, the total number of  
11 sample locations may be reduced as needed to achieve such spacing, except, in all events, a  
12 minimum of two (2) samples will be taken. In the event such maximum approximately one  
13 hundred and fifty (150) foot spacing would be exceeded if only five (5) sampling locations were  
14 used, additional sampling locations shall be added as necessary so as not to exceed such  
15 maximum spacing.

16 4.9.4.1.3. Collection and Analysis In All Locations. From all  
17 of the sample locations described in Sections 4.9.4.1.1 and 4.9.4.1.2, PG&E will collect and  
18 analyze pore water in accordance with the sampling protocol set forth in Exhibit 12 at three  
19 depths—zero to half (0-0.5) a foot bss, one to one and half (1-1.5) feet bss, and two to three (2-  
20 3) feet bss; co-located bulk sediment may also be collected and analyzed.

21 4.9.4.2. Bathymetry. PG&E shall conduct bathymetry to document  
22 sediment elevation trends.

23 4.9.4.3. Upset Event. In the event of an Upset Event, PG&E will  
24 undertake bathymetry testing in the area of the of the MNR footprint.

25 4.9.4.4. Reporting and Consequence of Testing Results. PG&E shall  
26 establish the boundary of the MNR footprint in the RAP and/or a RACR for constructed  
27 remedies with an MNR component. Following each sampling event, PG&E shall submit to the  
28 Regional Board, with a copy to SFHA, a monitoring report, which shall include sampling results

1 to be compared against the predicted recovery timeframe. The Year Five (5) monitoring report  
2 will include a recommendation for further monitoring, adaptive maintenance, another remedy, or  
3 an NFA determination.

4 4.9.4.4.1. SFHA's Right to Appeal. SFHA shall have a right  
5 to appeal to the Panel, in accordance with Section 5, any approval by the Regional Board or the  
6 State Water Board of a monitoring only or MNR Remedy or NFA determination recommended  
7 by PG&E pursuant to Section 4.9.4.4.

8 4.9.5. All Offshore Remedy Scenarios. In performing the post-remediation  
9 monitoring and sampling under Section 4.9, without prejudice to any right of SFHA to appeal an  
10 approval of an NFA, monitoring-only, or MNR-remedy based on the consideration thereof,  
11 PG&E shall have the right, but not the obligation, to recommend continued monitoring, adaptive  
12 maintenance, another remedy, or an NFA determination under application of a SWAC analysis  
13 to the Chemical Performance Standard Testing data. In each of the post-remediation monitoring  
14 scenarios in Section 4.9, there shall be an allowance of an approximately twenty (20) foot radius  
15 of the original location for resampling (including in the perimeter areas to be sampled) should an  
16 obstruction be encountered.

17 4.10. **West Harbor**. In the area designated as the "West Harbor," which is shown on  
18 Exhibit 16, PG&E shall deploy small "passive samplers" in accordance with U.S. EPA-  
19 approved passive sampling investigation guidance and methodology, as described in U.S. EPA  
20 2017 Laboratory, Field, and Analytical Procedures for Using Passive Sampling in the Evaluation  
21 of Contaminated Sediments: User's Manual. EPA/600/R-16/357, in the areas previously capped  
22 as part of CCSF's San Francisco Marina Yacht Harbor West Harbor Renovation Project (Dredge  
23 Areas B2-1 and B2-4), and within a perimeter boundary thereof, in the approximate locations  
24 shown on Exhibit 16. In the event passive sampling results from a passive sampler within the  
25 perimeter indicates a pore water concentration of more than 15 µg/L of Total Trigger PAHs,  
26 then PG&E shall undertake further step-out passive sampling, on an iterative basis, staggered  
27 and laterally offset in all accessible directions (i.e., west, north, and east) to include the next  
28 unsampled one to three closest points in an adjacent row or column, as shown on Exhibit 16.



1 PG&E shall perform such passive sampling pursuant to a work plan to be prepared by PG&E  
2 and submitted to the Regional Board. PG&E shall place the passive samplers in the West Harbor  
3 with spacing no less than approximately fifty (50) feet, and no greater than approximately one  
4 hundred and fifty (150) feet, between the passive samplers. PG&E shall report the results of the  
5 passive sampling in a report submitted to the Regional Board and shall include a  
6 recommendation for No Further Action, further Monitoring Only, or a remedy.

7 4.10.1. No Right of Appeal to Panel. SFHA shall have no right of appeal to the  
8 Panel under Section 5 from any approvals or determinations pursuant to Section 4.10, and the  
9 Panel shall have no authority with respect to any proposals, approvals or actions by PG&E or the  
10 Regional Board concerning the West Harbor, or any request by PG&E for a No Further Action  
11 determination concerning West Harbor. Other than as expressly set forth in this Section 4.10,  
12 PG&E shall have no other obligations under this Consent Decree with respect to the West  
13 Harbor.

14 4.11. **Force Majeure.**

15 4.11.1. PG&E shall not be considered to be in default in the performance of any  
16 of its obligations under this Consent Decree when performance becomes impossible due to  
17 circumstances beyond PG&E's control, including, without limitation, Force Majeure, which  
18 includes, but is not limited to, an act of God, act of war, act of terrorism, fire, explosion,  
19 extraordinary weather event, natural catastrophe, restraint by court order or public authority, or  
20 other cause beyond PG&E's reasonable control (collectively, "Force Majeure"). Delay in  
21 compliance with a specific obligation under this Consent Decree due to a Force Majeure event  
22 as defined in this Section shall not excuse or delay compliance with any other obligations  
23 required under this Consent Decree.

24 4.11.2. Best Efforts to Gain Access, Permits, Consents and Approvals. With  
25 respect to all activities contemplated or required to be undertaken by PG&E pursuant to Section  
26 4, it is understood and agreed that PG&E shall use best efforts to obtain all required access,  
27 permits, consents and approvals from the CCSF and its respective departments and from any  
28 other property owners, if and as needed, and from the governmental agencies with jurisdiction

1 over such work. Such best efforts shall require that PG&E make all reasonable and practicable  
2 efforts to satisfy all reasonable contingencies or conditions required to gain all necessary access,  
3 permits, consents and approvals, but such best efforts shall not require that PG&E accept  
4 unreasonable or impracticable terms or conditions in order to obtain such access, permits,  
5 consents or approvals. If, after using best efforts, PG&E is unable to obtain required access,  
6 permits, consents or approvals to perform an obligation under Section 4, such event shall  
7 constitute a Force Majeure.

8 4.11.3. In the event PG&E claims that compliance with an obligation it has under  
9 this Consent Decree was or is impossible due to a Force Majeure, it shall notify SFHA in writing  
10 within thirty (30) days of when PG&E first knew, or in the exercise of reasonable diligence  
11 under the circumstances should have known, of the event or circumstance that caused or would  
12 cause a failure to comply with such obligation (the "Notice of Force Majeure"). The Notice of  
13 Force Majeure shall identify the specific obligations under the Consent Decree that are or have  
14 been affected by the Force Majeure, the specific nature of the Force Majeure; the anticipated  
15 length of time the delay may persist, and/or whether performance has been rendered impossible  
16 by the Force Majeure; the measures taken or to be taken by to prevent or minimize delay or  
17 impossibility of performance of the affected obligations and any proposed modifications to those  
18 obligation(s) under the Consent Decree. PG&E may request a meet and confer, pursuant to the  
19 dispute resolution process in Section 6, to reach agreement as to a stipulation to be submitted to  
20 the Court for an order modifying this Consent Decree. In the event the Parties do not to reach  
21 agreement following the dispute resolution process, PG&E may move the Court for a  
22 modification of the Consent Decree based upon the Force Majeure and shall have the burden of  
23 establishing the Force Majeure. During the pendency of such a motion to modify the Consent  
24 Decree, PG&E shall not be deemed to be in default, breach or violation of this Consent Decree.  
25 Subject to the immediately preceding sentence, in the absence of a stipulation or order  
26 modifying the Consent Decree, PG&E shall be obligated to comply with all terms of this  
27 Consent Decree, notwithstanding any claim by it of a Force Majeure.  
28

1           4.12. Except as required under Section 4, PG&E is not required by this Consent Decree  
2 to undertake any additional investigation, remediation, monitoring or reporting.

3       **5. APPEALS TO PANEL.** SFHA shall have the following rights of appeal of certain  
4 Regional Board and State Water Board (either, the "Board") approvals to a panel to be formed  
5 pursuant to this Section 5 under the appeal process set forth herein. The Panel's sole role shall be  
6 to hear appeals in accordance with the procedures set forth herein. The Panel shall serve no other  
7 purpose and have no authority other than as expressly provided for in this Section 5.

8           5.1. Formation of Panel. The Panel shall be comprised of three individuals  
9 (collectively "Panelists"): one Panelist to be designated by SFHA; one Panelist to be designated  
10 by PG&E; and a third Panelist to be jointly chosen by SFHA's designee and PG&E's designee.  
11 If SFHA's designee and PG&E's designee cannot agree on the choice for the third Panelist, the  
12 competing choices of the Parties' designees for the third Panelist will be submitted by the Parties  
13 to the Court (the then-presiding judge in this matter) for resolution. In the event a Party's  
14 Panelist designate is no longer willing or able to serve during the term of this Consent Decree,  
15 the Party that appointed such Panelist shall have the right to choose a replacement Panelist. In  
16 the event the third Panelist selected hereunder is no longer willing or able to serve as a Panelist  
17 during the term of this Consent Decree, the other two Panelists will jointly select his or her  
18 replacement. The three selected Panelists shall, together, comprise the "Panel."

19           5.1.1. Any person who has been or is employed by Haley & Aldrich or  
20 EnviroAssets, Inc. is disqualified for service on the Panel. Otherwise, SFHA and PG&E shall  
21 not be restricted in the selection of their respective Panelist designees; provided, however, that  
22 prior to his/her selection as a potential Panelist, each candidate shall acknowledge and agree that  
23 said candidate/Panelist will not be permitted to, and shall not, himself or herself undertake any  
24 work for any Party or for counsel to any Party during the Term of the Consent Decree.  
25 Notwithstanding the foregoing, the firm with which the Panelist is affiliated, if any, may  
26 perform work for a Party or for a law firm that is counsel to a Party on matters that are unrelated  
27 to the matters that are the subject of this Consent Decree, but only so long as the total volume of  
28 work performed for such Party or such law firm does not exceed ten percent (10%) of that firm's

1 annual revenue in any given year. In the event a Panelist's firm performs any work for a Party or  
2 for a law firm that is counsel to a Party, then the Panelist's firm shall ensure that an "ethical  
3 wall" is created to assure there is no exchange of any information, data, documents or other  
4 communications between the Panelist and anyone else in his/her firm regarding the subject  
5 matter of this Consent Decree.

6 5.1.2. Upon its formation, the Panel shall be provided with a copy of this  
7 Consent Decree and their attention shall be drawn to these procedures and to other agreed-upon  
8 requirements relating to appeals as set forth herein.

9 5.2. No Ex Parte Communication. During the Term of this Consent Decree, the  
10 Parties shall not communicate on an *ex parte* basis with any Panelist concerning any matters that  
11 are relevant to the subject matters of this Consent Decree (including, without limitation, any  
12 matters relating to the nature, scope, results or status of work to be performed under this Consent  
13 Decree).

14 5.3. Appeal Process. The following appeal process shall govern all appeals to the  
15 Panel permitted under this Consent Decree:

16 5.3.1. Timing of Appeal. Subject to the prohibitions in Sections 4.2.3.6.1, 4.3.6,  
17 and 4.10.1, within thirty (30) days following written notification from PG&E to SFHA of the  
18 decision of the Board (which must attach a copy of such Board decision) (a) approving a  
19 "monitoring only" remedy; (b) approving a MNR remedy proposal; or (c) approving a request  
20 for NFA determination, SFHA shall have the right to appeal the approval through submission of  
21 a written "Notice of Appeal" to the Panel and to PG&E. SFHA has no right of appeal of any  
22 other Board approvals. Any Notice of Appeal submitted by SFHA to the Panel or to PG&E more  
23 than thirty (30) days following PG&E's notification to SFHA of the Board's action shall be  
24 deemed void and of no force or effect and the Panel shall take no action in response to such  
25 Notice of Appeal.

26 5.3.2. Notice of Appeal. SFHA's Notice of Appeal shall include, at a minimum,  
27 the following information: the specific action of the Board that the Panel is requested to review  
28 and a copy of the order or resolution of the Board that is being challenged.

1                   5.3.3. Submittal of Digital Record. Upon receipt from SFHA of a Notice of  
2 Appeal, PG&E shall have twenty-one (21) days within which to submit, by email to the Panel  
3 and copied to SFHA, a list with digital links to all documents uploaded to Geotracker from and  
4 after and in connection with the approval that is being challenged by the Notice of Appeal.

5                   5.3.4. Briefing. Submittals to the Panel by the Parties are to be made as follows:

6                         5.3.4.1. SFHA's Submission. No later than thirty (30) days after receipt  
7 of the digital record provided for in Section 5.3.3, SFHA may submit to the Panel for its review  
8 and consideration, and simultaneously to PG&E, a brief of no more than fifteen (15) pages,  
9 along with any Supporting Documents. "Supporting Documents," as used in this Section 5, shall  
10 mean and be limited to relevant technical data or analyses, and scientific/technical reports or  
11 publications but shall not include any additional documentation (letters, briefs, declarations)  
12 generated by the parties or any third party to support or oppose the appeal to the Panel. Any  
13 brief or Supporting Documents submitted by SFHA after said thirty (30) day deadline shall not  
14 be considered by the Panel. Absent a request from the Panel or a grant of permission from the  
15 Panel, as provided for in Section 5.3.6, and subject to Section 5.3.6.3, SFHA shall not submit  
16 any other documentation to the Panel.

17                         5.3.4.2. PG&E's Submission. No later than thirty (30) days after  
18 receipt of SFHA's submittal under Section 5.3.4.1, PG&E may submit to the Panel for its review  
19 and consideration, and simultaneously to SFHA, a brief of no more than fifteen (15) pages,  
20 along with any Supporting Documents. Any brief or Supporting Documents submitted by PG&E  
21 after said thirty (30) day deadline shall not be considered by the Panel. Absent a request from  
22 the Panel as provided for in Section 5.3.6, and subject to Section 5.3.6.3, PG&E shall not submit  
23 any other documentation to the Panel.

24                   5.3.5. Extension of Deadlines. The deadlines set in Section 5 may be modified  
25 by a mutually agreed-upon stipulation between the Parties, without action by the Panel;  
26 provided, however, a copy of any such stipulation shall be submitted to the Panel. The deadlines  
27 set in this Section 5 may otherwise only be extended by the Panel for good cause, for a period  
28 not to exceed ninety (90) days, upon written request of no more three than three (3) pages

1 simultaneously sent to the other Party. The other Party may oppose the request through  
2 submission to the Panel of an opposition of no more than three (3) pages, within seven (7) days  
3 of that Party's receipt of the request for an extension.

4 5.3.6. Additional Document Submittals.

5 5.3.6.1. Further Briefing Requested by Panelists. Further briefing  
6 and/or any additional existing data or information may be requested from either or both Parties  
7 by joint written request of at least two Panelists who believe such data or information is  
8 necessary to the determination of the subject appeal. In the event a Party is unwilling or unable  
9 to comply with the Panel's request, the Party shall so state in writing to the Panel and include a  
10 brief statement, of no more three (3) pages, of the Party's reason for not providing the requested  
11 data or information. In the event a Party refuses to provide requested documents or information,  
12 it shall not be required to provide any log of existing and known documents that are withheld or  
13 the basis for the withholding.

14 5.3.6.2. Further Sampling/Data Analysis Requested by Panelists. In  
15 addition, the Panel, by joint request of at least two Panelists, may request, but not order, that  
16 PG&E undertake limited additional sampling or data analysis to assist the Panel's evaluation of  
17 the subject appeal. Regardless of whether a request for additional sampling is refused, the  
18 Panelists, and each of them, are prohibited from independently conducting such additional  
19 sampling but not additional analyses of existing data.

20 5.3.6.3. Party Requests for Permission to Submit Additional  
21 Documentation. Absent a request from the Panel pursuant to this Section 5, neither Party may  
22 submit to the Panel any additional briefing or other documentation; provided, however, in the  
23 event there are relevant data that have been generated or first made available since the Party's  
24 previous submission to the Panel on the appeal at issue, a Party may request permission from the  
25 Panel, through a brief of no more than three (3) pages, to submit such additional Supporting  
26 Documents. The other Party may oppose such a request, through a brief of no more than three  
27 (3) pages submitted to the Panel within seven (7) days of receipt of such request.  
28

1                   5.3.7. De Novo Review. The Panel shall undertake a De Novo review of the  
2 documentation and information provided to the Panel in accordance with this Section 5. "De  
3 Novo," as used herein, shall mean using their own judgment, in accordance with applicable laws  
4 and standards, as though reviewed for the first time. Neither SFHA nor PG&E shall bear any  
5 burden of proof on appeal to the Panel. The Board's approval of a Monitoring Only Remedy or  
6 MNR remedy proposal or NFA determination that is the subject of the appeal shall not be  
7 entitled to any presumption of correctness or incorrectness, but rather shall be considered in light  
8 of the facts, technical data and information, applicable law and the terms of the Consent Decree.

9                   5.3.8. Scope of Panel Role. Subject to certain restrictions on appeals to the Panel  
10 as specifically provided in Section 4, the sole determination within the Panel's purview shall be  
11 whether to accept or reject the Board's approval of the Monitoring Only Remedy, MNR remedy,  
12 or NFA determination that is the subject of the appeal, as provided for under this Consent  
13 Decree. Such determination shall be made in accordance with the decision of a majority of the  
14 Panel members. The Panel shall make no decision unless there is a quorum of three Panelists on  
15 the Panel to hear and decide the appeal. The fact that an applicable performance standard under  
16 Section 4 is not achieved in the post-remedy compliance monitoring phase does not mandate the  
17 Panel's rejection of the Board's approval of a Monitoring Only or MNR remedy, or a request for  
18 an NFA determination. If the Panel rejects the challenged Board approval, it may suggest, but it  
19 cannot require, any additional or alternative remedy.

20                   5.3.9. Written Determination by Panel. The Panel shall be required to take  
21 reasonable steps to diligently and expeditiously review the documents and information  
22 submitted to the Panel, and to promptly issue a written determination to accept or reject the  
23 Board's approval of the Monitoring Only or MNR remedy proposal or request for NFA  
24 determination. The Panel shall issue a written determination, including the basis for its decision,  
25 and simultaneously send it to SFHA and to PG&E. Such Panel determination shall be deemed to  
26 be final and binding upon the Parties.

27                   5.3.10. PG&E Work During Appeal. During the pendency of any Panel appeal,  
28 PG&E shall be entitled to act in accordance with the Board's determination unless and until

1 overturned by the Panel. PG&E shall not, however, perform any physical work in the area that is  
2 the subject of the approval or determination from which an appeal is taken that would  
3 substantially and materially interfere with the achievement of an alternative action in the event  
4 the Board's determination is overturned (such as permanently closing or destroying any  
5 groundwater monitoring or extraction wells).

6 5.3.11. Post-Appeal Actions. In the event the Panel rejects the Board's approval at  
7 issue in the appeal, then no later than ninety (90) days from the Panel's decision, PG&E shall  
8 notify SFHA and the Regional Board in writing of the remedy or remedies PG&E intends to  
9 evaluate for the area that was the subject of the Panel's decision. PG&E will be required to  
10 propose a different action to the Regional Board from the Monitoring Only or MNR remedy or  
11 NFA determination that was rejected. In the event that PG&E's chosen remedy following a Panel  
12 decision rejecting the subject Board approval is a Monitoring Only or MNR proposal, PG&E  
13 shall submit such proposal to the Regional Board no later than six (6) months from the date of  
14 the Panel's decision. In the event PG&E's chosen remedy is other than a Monitoring Only or  
15 MNR proposal, PG&E shall submit to the Regional Board a RAP for such area no later than  
16 twelve (12) months from the date of the Panel's decision.

17 5.3.12. PG&E Right of Appeal. Notwithstanding any other terms herein, PG&E  
18 shall have the right, in accordance with applicable state laws and regulations, to appeal to the  
19 State Water Board any rejection by the Regional Board of a proposed Monitoring Only or MNR  
20 remedy, or a request for an NFA determination. In the event PG&E initiates such an appeal to  
21 the State Water Board, and the term of this Consent Decree expires while that appeal by PG&E  
22 is pending, SFHA's right to appeal any subsequent approval of a proposed Monitoring Only or  
23 MNR remedy, or a request for an NFA determination by the State Water Board relating to  
24 PG&E's appeal shall be preserved, along with the associated rights and obligations of the  
25 Parties.

26 5.3.13. Transmittal Definitions. As used in the foregoing sections regarding  
27 transmittals to be made in the Panel appeal process, "sent" or "send" means transmittal via email  
28 to the addresses provided by a particular Party. "Receipt" or "received," as used herein, shall



mean the date on which the transmittal was sent to the Party in question, subject to confirmation of delivery.

5.3.14. Exclusive Remedy. An appeal to the Panel shall be SFHA's sole and exclusive recourse to challenge the Board's approval of a Monitoring Only or MNR remedy proposal, or a request for NFA determination. SFHA expressly waives any right of administrative or judicial appeal under the state Water Code and related regulations with respect to such approvals. In addition, SFHA shall have no right of appeal to the Panel, and expressly waives and agrees not to pursue any right of administrative or judicial appeal, with respect to any other remedies approved by the Regional Board.

5.3.15. Fees and Costs on Appeal.

5.3.15.1. Panelist Fees. The reasonable fees for the services of each of the Panelists shall be paid by PG&E, subject to PG&E's timely receipt and review of invoices to be submitted by each of the Panelists to PG&E and to SFHA on a monthly basis. Such invoices shall include a description of work performed each date for which fees are sought, but shall not include information that would reveal the thought process(es) of a Panelist.

5.3.15.2. Attorney's/Expert's Fees. In the event SFHA prevails in an appeal to the Panel (i.e., the Panel rejects the decision of the Board at issue in the appeal), then SFHA shall be entitled to reimbursement of its reasonable attorneys' and expert fees incurred from and after submission by SFHA of a Notice of Appeal and solely in connection with such appeal and not for Compliance Monitoring. In the event there is a dispute as to the amount of the attorneys' or expert fees to be reimbursed, SFHA may make a motion to the Court to resolve such dispute.

**6. DISPUTE RESOLUTION.** If a dispute under this Consent Decree arises, other than an appeal to the Panel under Section 5, either Party can request a meet and confer within ten (10) business days of receiving written notification from the other Party of a request for a meeting to resolve the dispute. The notice shall set forth the nature of the dispute. The meet and confer under this Section 6 shall be limited to one four-hour meeting unless otherwise agreed by the Parties. In the event the meet and confer process has successfully resolved the dispute, then

1 within sixty (60) days following its receipt of invoices, PG&E shall reimburse SFHA's  
2 reasonable attorney's and expert's fees incurred for participation in the meet and confer meeting,  
3 using the wire instructions in Section 3.6.1.1, provided, however, the total of the fees to be  
4 reimbursed for each such meet and confer shall be capped at Five Thousand Dollars (\$5,000). If  
5 the Parties fail to meet and confer or if the meet and confer does not resolve the issue, then the  
6 Parties shall each be entitled to bring a motion before the United States District Court for the  
7 Northern District of California, for the limited purpose of enforcing or modifying the terms of  
8 this Consent Decree, and will be entitled to seek attorney's fees and costs under Section 11.12.

9 **7. SUBMISSION OF CONSENT DECREE TO U.S. EPA/DOJ.** Within three (3)  
10 business days of receiving all of the Parties' signatures to this Consent Decree, SFHA shall  
11 submit this Consent Decree to the U.S. Department of Justice ("DOJ") and the U.S. EPA for  
12 agency review consistent with 40 C.F.R. §135.5. The agency review period expires forty-five  
13 (45) calendar days after receipt by the DOJ, evidenced by correspondence from DOJ  
14 establishing the review period. In the event DOJ or U.S. EPA comments negatively on the  
15 provisions of this Consent Decree, the Parties agree to meet and confer to attempt to resolve the  
16 issues raised by DOJ or U.S. EPA, as applicable.

17 **8. DISMISSAL OF COMPLAINT.** Within ten (10) calendar days following the  
18 expiration of the forty-five (45) day agency review period, the Parties shall submit a stipulation  
19 and proposed order to the Court to (a) request the approval and entry of this Consent Decree and  
20 (b) request dismissal of SFHA's claims (but not Clarke's claims) in this action in their entirety  
21 with prejudice. Such dismissal shall not affect the rights and obligations of the Parties under this  
22 Consent Decree, nor shall it affect the power of the Court to enforce this Consent Decree.

23 **9. BINDING EFFECT, CLAIMS COVERED AND RELEASED**

24 9.1. **SFHA's Releases and Waivers.** This Consent Decree is a full, final, and binding  
25 resolution between SFHA, acting on behalf of itself, and its present and future members,  
26 officers, directors, and each of their respective agents, representatives, heirs, beneficiaries,  
27 executors, administrators, attorneys, insurers, successors and assigns, on the one hand ("SFHA  
28

1 Releasers"), and PG&E and its past, present and future agents, representatives, employees,  
2 officers, directors, affiliates, parents, subsidiaries, partners, predecessors in interest, related  
3 entities, attorneys, insurers, successors and assigns ("Defendant Releasees"), on the other hand,  
4 of all claims that were asserted by the SFHA against PG&E in the Notice and the First Amended  
5 Complaint, including, without limitation, claims under RCRA, the CWA, and state statutory and  
6 common laws.

7 9.2. Without limiting the generality of the foregoing, SFHA Releasers, and each of  
8 them, hereby release, waive and forever discharge Defendant Releasees from any and all manner  
9 of actions, causes of action, claims, demands, rights, suits, obligations, debts, contracts,  
10 agreements, promises, liabilities, damages, charges, losses, costs, expenses, attorneys' fees and  
11 expert fees, of any nature whatsoever, known or unknown, in law or equity, fixed or contingent,  
12 now or in the future, arising from or relating to the MIA, PG&E's alleged ownership and  
13 operation of any portion of the Former MGPs or Former MGP Sites, and any alleged release of  
14 hazardous substances, any alleged handling, storage, treatment, transportation or disposal of  
15 solid or hazardous wastes, any alleged discharge of pollutants, or the alleged presence of  
16 hazardous substances, hazardous or solid wastes, pollutants or contaminants at, under or  
17 emanating from Former MGP Sites or Former MGPs. Notwithstanding the foregoing, this  
18 release and waiver shall not include, and shall have no effect upon, any claim by SFHA that  
19 PG&E breached this Consent Decree, any action by SFHA to enforce this Consent Decree, any  
20 claim by SFHA arising out of an MGP other than the Former MGPs, or any claim by SFHA  
21 arising out of an MGP site other than the Former MGP Sites (collectively, "SFHA's Excepted  
22 Claims").

23 9.2.1.1. SFHA Releasers (except for SFHA's attorneys), and each of  
24 them, shall not institute, participate or assist (for example, by providing financial assistance,  
25 personnel time, advice or support), directly or indirectly, in any suits, claims or actions against  
26 any Defendant Releasees with regard to the claims released and waived under this Section 9,  
27 unless such action is to enforce this Consent Decree. By execution of its approval as to the form  
28 of this Consent Decree, Gross & Klein agree that neither Gross & Klein, Stuart G. Gross,



Benjamin H. Klein, nor any firm with which they are affiliated, nor any attorney working at said law firm, shall represent any past members of SFHA or any other herring fisherman or herring association with respect to the claims waived and released by the SFHA Releasors.

9.3. With respect to the foregoing waivers and releases in this Section 9, SFHA Releasors, and each of them, hereby specifically waive any and all rights and benefits which any of them now has, or in the future may have, conferred by virtue of the provisions of Section 1542 of the California Civil Code, which provides as follows:

A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR.

Initials: YD

9.4. **PG&E's Release and Waiver.** PG&E, and its past, present and future agents, representatives, employees, officers, directors, affiliates, parents, subsidiaries, partners, predecessors in interest, related entities, attorneys, insurers, successors, and assigns ("Defendant Releasors") hereby releases, waives and forever discharges SFHA and its current and former members, officers, directors, agents, representatives, heirs, beneficiaries, executors, administrators, and attorneys, and their respective successors and assigns, from any and all manner of actions, causes of action, claims, demands, rights, suits, obligations, debts, contracts, agreements, promises, liabilities, damages, charges, losses, costs, expenses, and attorneys' fees and expert fees, of any nature whatsoever, known or unknown, in law or equity, fixed or contingent, now or in the future, relating to or arising from the Notice, the First Amended Complaint, and the MIA. Notwithstanding the foregoing, this release and waiver shall not include, and shall have no effect upon, any action by PG&E to enforce this Consent Decree, any claim by PG&E that SFHA has breached this Consent Decree, or any rights or defenses relating to any of SFHA's Excepted Claims (PG&E's Excepted Claims").

9.5. With respect to the foregoing waivers and releases in this Section 9, Defendant Releasors, and each of them, hereby specifically waive any and all rights and benefits which any



1 of them now has, or in the future may have, conferred by virtue of the provisions of Section  
2 1542 of the California Civil Code, which provides as follows:

3 A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE  
4 CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER  
5 FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN  
6 BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER  
7 SETTLEMENT WITH THE DEBTOR.

Initials: AKW

8 9.6 Notwithstanding anything to the contrary in this Consent Decree, the waivers  
9 and releases contained in Section 9 shall survive the termination of this Consent Decree.

#### 10 10. NOTICES

11 10.1. Unless otherwise specified herein, all correspondence and notices required by this  
12 Consent Decree shall be in writing and, to the extent feasible, be sent via electronic mail  
13 transmission to the e-mail addresses listed below or, if electronic mail transmission is not  
14 feasible, personally delivered or sent by first-class, registered or certified mail, return receipt  
15 requested, or by overnight courier, to the following addresses:

16 For SFHA to:

17 Matt Ryan, President  
18 5145 Graveline Rd.  
19 Bellingham, WA 98226  
20 email: mryan50@comcast.net

21 with a copy (which shall not constitute notice) to:

22 Stuart G. Gross  
23 Gross & Klein LLP  
24 The Embarcadero  
25 Pier 9, Suite 100  
26 San Francisco, CA 94111  
27 email: sgross@grosskleinlaw.com

28 For PG&E to:

Kevin M. Sullivan  
Pacific Gas and Electric Company  
77 Beale Street, B28P  
San Francisco, CA 94105  
email: Kevin.M.Sullivan@pge.com

with a copy (which shall not constitute notice) to:

Pacific Gas and Electric Company  
Managing Counsel, Litigation  
77 Beale Street, Mail Code B30A, San Francisco, CA 94120-7442 (by hand-delivery)  
P.O. Box 7442, San Francisco, CA 94120-7442 (by mail)  
email: Elizabeth.Collier@pge.com

Any Party may, from time to time, specify in writing to the other Parties a change of address or addressee to which all notices and other communications shall be sent.

## **11. MISCELLANEOUS PROVISIONS**

**11.1. Integration.** Except for any agreements that may be entered into in writing by and between the Parties concurrently with this Consent Decree, this Consent Decree contains the sole and entire agreement between the Parties and any and all prior negotiations and understandings related hereto shall be deemed to have been merged into this Consent Decree.

**11.2. Governing Law.** Except as otherwise expressly provided in this Consent Decree, the terms of this Consent Decree shall be governed by, and interpreted and enforced in accordance with, the laws of the State of California.

**11.3. Effective Date.** This Consent Decree shall not be effective until it is approved and entered by the Court, in which case it shall be effective as of the date it is entered ("Effective Date"). If the Court disapproves or otherwise declines to approve and enter this Consent Decree, the Parties shall meet and confer as to whether to modify the terms of this Consent Decree to address the Court's concerns. If the Parties do not agree, in principle, on a modified consent decree within thirty (30) days after the Court enters its order disapproving this Consent Decree, then this Consent Decree shall automatically be null and void, and this action shall proceed on its normal course.

**11.4. Retention of Jurisdiction.** This Court shall retain jurisdiction over this matter for the Term of this Consent Decree to implement, modify, and enforce this Consent Decree.

**11.5. Modification.** This Consent Decree may not be modified or amended except by further written stipulation of the Parties and approval of the Court, or by further order of the Court.

**11.6. Construction.** The language in all parts of this Consent Decree, unless otherwise stated, shall be construed according to its plain and ordinary meaning. The captions, paragraph

1 headings, and Table of Contents used in this Consent Decree are for reference only and shall not  
2 affect the construction of this Consent Decree. The Parties have negotiated this Consent Decree  
3 and agree that it shall not be construed against the Party preparing it, but shall be deemed to  
4 have been jointly prepared by the Parties, and any uncertainty and ambiguity shall not be  
5 interpreted against any one Party.

6 11.7. **Term of Consent Decree.** This Consent Decree shall continue in effect for a  
7 term of ten (10) years from the Effective Date ("Term"), at which time the Consent Decree, and  
8 all obligations under it, shall automatically terminate.

9 11.8. **Severability.** If any one or more of the provisions of this Consent Decree shall  
10 for any reason be held invalid, illegal or unenforceable in any respect, that invalidity, illegality  
11 or unenforceability shall not affect any other provision herein, and this Consent Decree shall be  
12 construed as if the invalid, illegal or unenforceable provision had never been included, provided,  
13 however, in no event shall any Party be deprived a material consideration by operation of this  
14 provision.

15 11.9. **Assignment.** All of the rights, duties, and obligations contained in this Consent  
16 Decree shall inure to the benefit of and be binding upon each of the Parties and their respective  
17 successors and assigns.

18 11.10. **Authority to Sign.** The undersigned representatives for the SFHA and for PG&E  
19 each represent and warrant that he/she has read, understood and agreed to all of the terms and  
20 conditions of this Consent Decree and is authorized by the Party that he/she represents to enter  
21 into and execute this Consent Decree on its behalf.

22 11.11. **Counterparts/Signatures.** This Consent Decree may be executed in one or more  
23 counterparts which, taken together, shall be deemed to constitute one and the same document.  
24 The Parties' signatures to this Consent Decree transmitted by facsimile or electronic mail  
25 transmission shall be deemed binding.

26 11.12. **Attorney's Fees For Enforcement or Modification of Consent Decree.** In the  
27 event any action is taken by any Party to enforce or modify this Consent Decree (which does not  
28 include any appeal to the Panel under Section 5), reasonable attorney's fees and costs (including

GROSS & KLEIN LLP  
THE EMBARCADERO  
PIER 9, SUITE 100  
SAN FRANCISCO, CA 94111

expert fees) shall be awarded in accordance with the standard established by § 505 of the Clean Water Act, 33 U.S.C. § 1365(d), and applicable case law interpreting that standard.

The Parties hereto enter into this Consent Decree and submit it to the Court for its approval and entry as a final judgment.

DATED: 7-25-2018 SAN FRANCISCO HERRING ASSOCIATION

By: [Signature]  
Title: President

DATED: 7/25/2018 PACIFIC GAS AND ELECTRIC COMPANY and PG&E CORPORATION

By: [Signature]  
Title: VICE PRESIDENT LAND & ENVIRONMENTAL MANAGEMENT

APPROVED AS TO FORM:

GROSS & KLEIN LLP

By: [Signature]  
STUART G. GROSS  
ATTORNEYS FOR SAN FRANCISCO HERRING ASSOCIATION

ALLEN MATKINS LECK GAMBLE MALLORY & NATSIS LLP

By: [Signature]  
SANDI L. NICHOLS  
ATTORNEYS FOR PACIFIC GAS AND ELECTRIC COMPANY AND PG&E CORPORATION

WFBM, LLP

By: [Signature]  
SCOTT D. MROZ  
ATTORNEYS FOR PACIFIC GAS AND ELECTRIC COMPANY AND PG&E CORPORATION

[PROPOSED] CONSENT DECREE BETWEEN THE PLAINTIFF SAN FRANCISCO HERRING ASSOCIATION AND DEFENDANTS; Case No. 14-cv-04393 WHO (JCS)



1 **APPROVED AND SO ORDERED.**

2 Dated: \_\_\_\_\_ By: \_\_\_\_\_


3 The Honorable William H. Orrick  
4 United States District Court Judge  
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# **EXHIBIT 1**





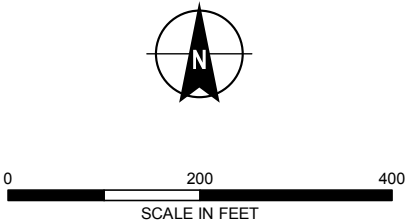
LEGEND

 APPROXIMATE LIMITS OF HISTORICAL MANUFACTURED GAS PLANT (MGP)

NOTES

1. ALL LOCATIONS ARE APPROXIMATE.

2. AERIAL IMAGERY SOURCE: CITY AND COUNTY OF SF, 2014



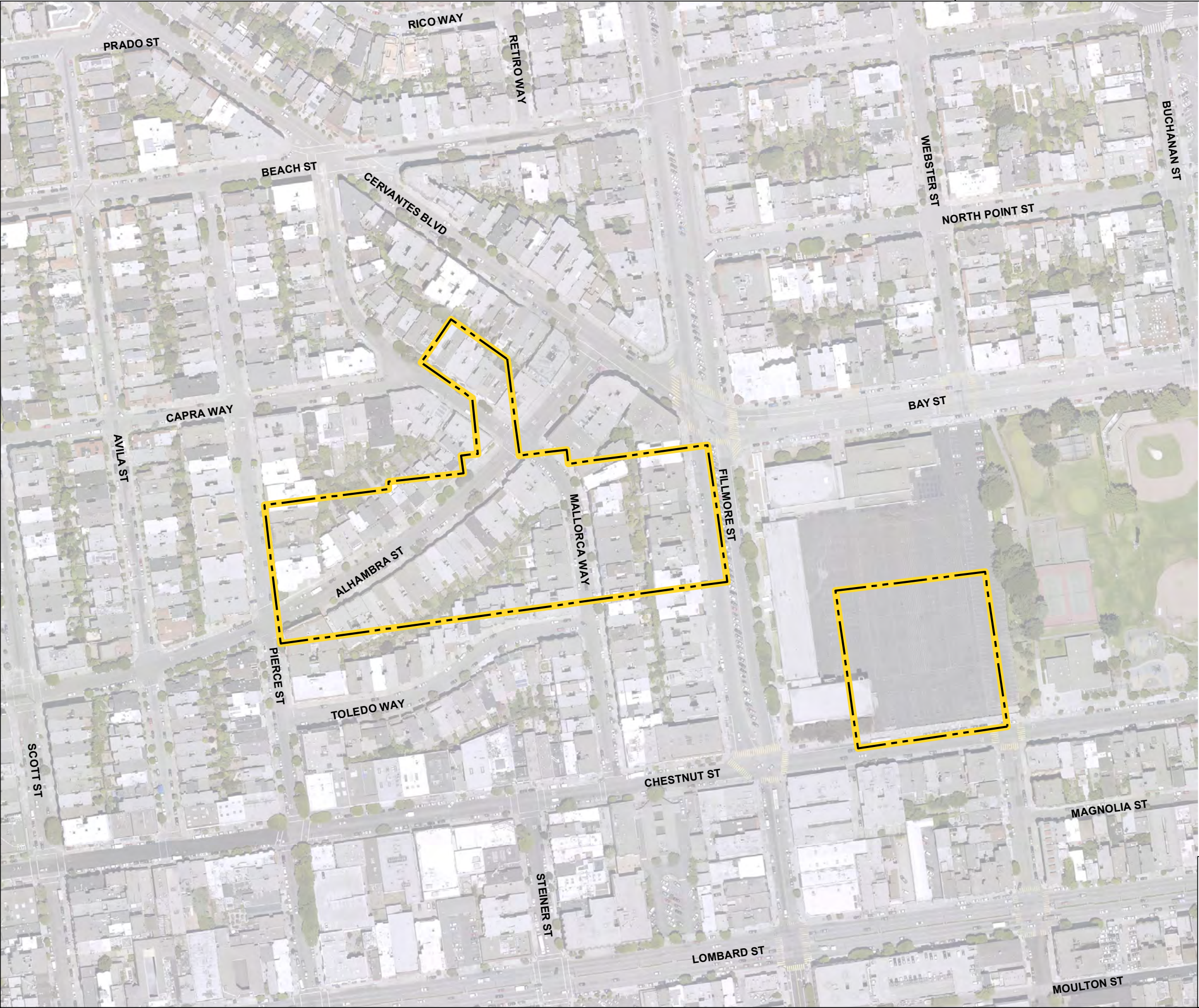
**HALEY ALDRICH** PACIFIC GAS AND ELECTRIC COMPANY (PG&E)  
FORMER NORTH BEACH MANUFACTURED GAS PLANT SITE  
SAN FRANCISCO, CALIFORNIA

FORMER NORTH BEACH MGP SITE




# **EXHIBIT 2**

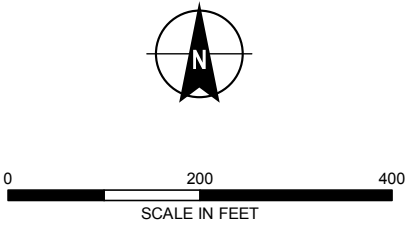




**LEGEND**

 APPROXIMATE LIMITS OF HISTORICAL MANUFACTURED GAS PLANT (MGP)

- NOTES**
- 1. ALL LOCATIONS ARE APPROXIMATE.
  - 2. AERIAL IMAGERY SOURCE: CITY AND COUNTY OF SF, 2014




**HALEY ALDRICH** PACIFIC GAS AND ELECTRIC COMPANY (PG&E)  
FORMER FILLMORE MANUFACTURED GAS PLANT SITE  
SAN FRANCISCO, CALIFORNIA

FORMER FILLMORE MGP SITE

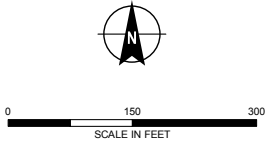


# **EXHIBIT 3**



LEGEND  
 HISTORICAL MANUFACTURED GAS PLANT (MGP) SITE BOUNDARY

NOTES  
1. ALL LOCATIONS ARE APPROXIMATE.  
2. AERIAL IMAGERY SOURCE: CITY AND COUNTY OF SF, 2014



**HALEY ALDRICH** PACIFIC GAS AND ELECTRIC COMPANY (PG&E)  
FORMER BEACH STREET MANUFACTURED GAS PLANT SITE  
SAN FRANCISCO, CALIFORNIA

FORMER BEACH STREET MGP SITE

# **EXHIBIT 4**



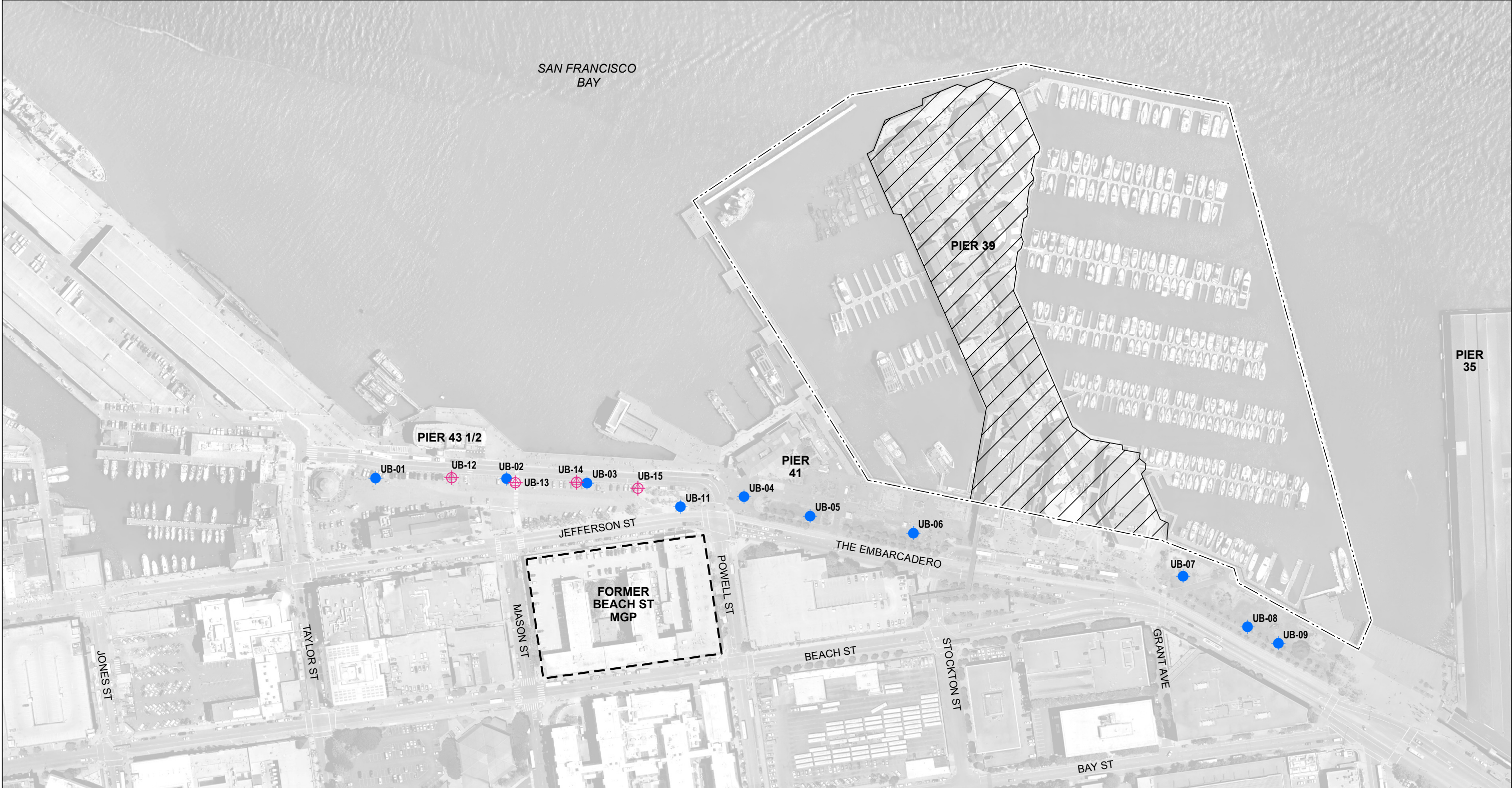
**EXHIBIT 4: List of "EPA PAH-34" for Analytical Measurement to Quantify "Total Trigger PAHs"**

PAH	CAS*	Molecular Weight (µg/mol)
Naphthalene	91203	128.17
C1-Naphthalenes	-	142.20
Acenaphthylene	208968	152.2
Acenaphthene	83329	154.21
C2-Naphthalenes	-	156.23
Fluorene	86737	166.22
C3-Naphthalenes	-	170.25
Anthracene	120127	178.12
Phenanthrene	85018	178.23
C1-Fluorenes	-	180.25
C4-Naphthalenes	-	184.28
C1-Phenanthrene/anthracenes	-	192.26
C2-Fluorenes	-	194.27
Pyrene	129000	202.26
Fluoranthene	206440	202.26
C2-Phenanthrene/anthracenes	-	206.29
C3-Fluorenes	-	208.30
C1-Pyrene/fluoranthenes	-	216.29
C3-Phenanthrene/anthracenes	-	220.32
Benz(a)anthracene	56553	228.29
Chrysene	218019	228.29
C4-Phenanthrenes/anthracenes	-	234.23
C1-Benzanthracene/chrysenes	-	242.32
Benzo(a)pyrene	50328	252.31
Perylene	198550	252.31
Benzo(e)pyrene	192972	252.32
Benzo(b)fluoranthene	205992	252.32
Benzo(k)fluoranthene	207089	252.32
C2-Benzanthracene/chrysenes	-	256.23
Benzo(ghi)perylene	191242	276.23
C3-Benzanthracene/chrysenes	-	270.36
Indeno(1,2,3-cd)pyrene	193395	276.23
Dibenz(a,h)anthracene	53703	278.35
C4-Benzanthracene/chrysenes	-	284.38

\* For C# PAHs CAS is not available.

# **EXHIBIT 5**



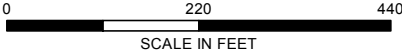


LEGEND

- UPLAND BORING
- ⊕ PROPOSED GRAB GROUNDWATER SAMPLING LOCATION
- ▨ PIER 39
- ▭ PIER 39 HARBOR
- ▭ FORMER BEACH STREET MANUFACTURED GAS PLANT (MGP)

NOTES

1. AERIAL IMAGERY SOURCE: CITY AND COUNTY OF SF, 2014



HALEY  
ALDRICH

PACIFIC GAS AND ELECTRIC COMPANY (PG&E)  
SAN FRANCISCO, CALIFORNIA

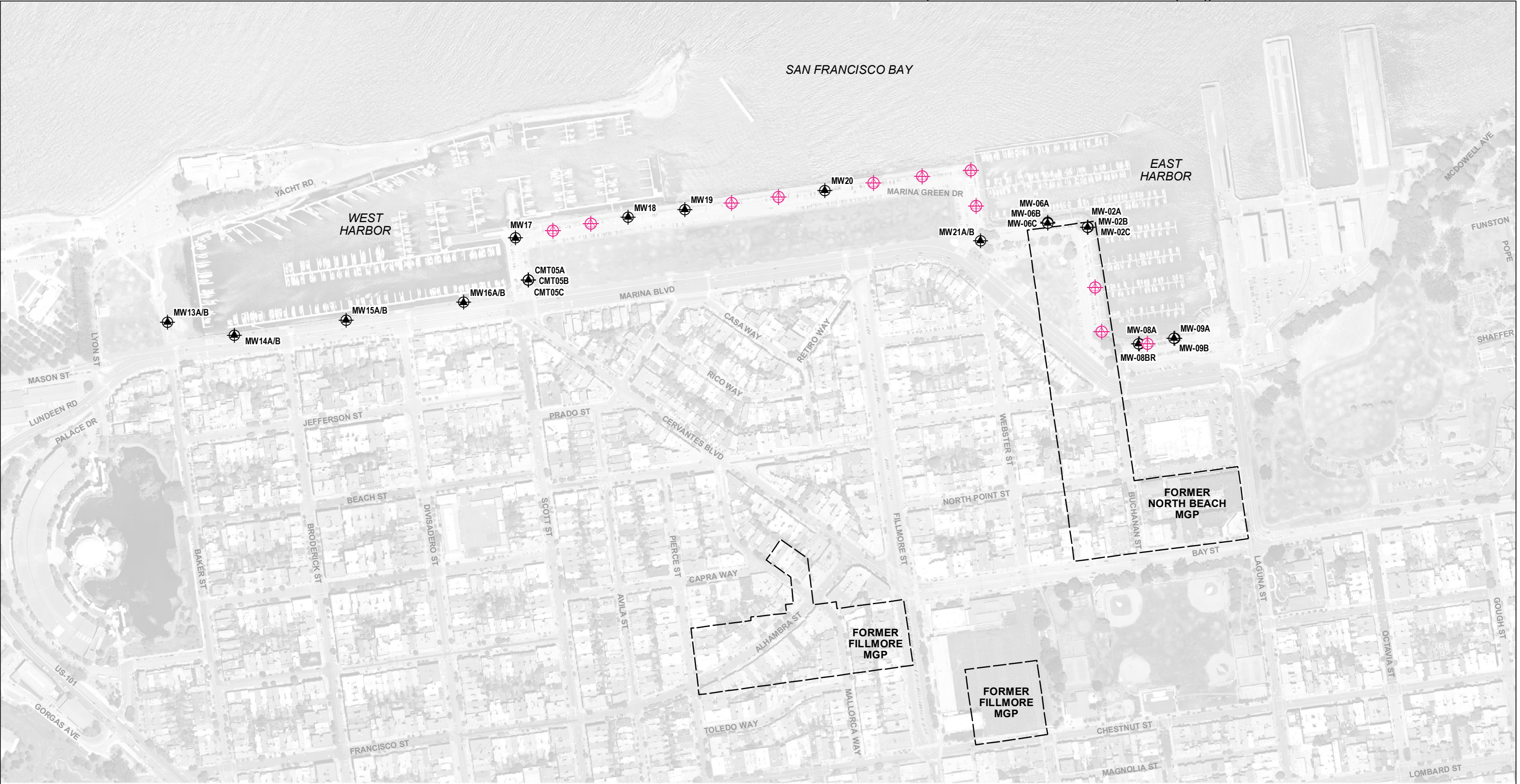
PIER 35 TO JONES ST. SOIL BORING/  
GRAB GROUNDWATER SAMPLING MAP

JULY 2018

EXHIBIT 5

# **EXHIBIT 6**





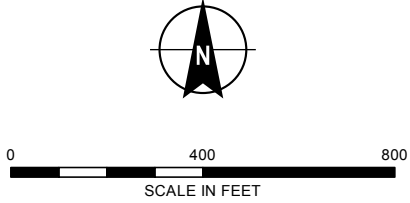
**LEGEND**

- MONITORING WELL
- AGREED UPON LOCATION OF NEW MONITORING WELL
- APPROXIMATE LIMITS OF HISTORICAL MANUFACTURED GAS PLANT (MGP)

**NOTES**

1. FINAL WELL LOCATIONS MAY BE ADJUSTED TO ACCOUNT FOR SUBSURFACE UTILITIES AND/OR ANY OTHER ACCESS CONSTRAINTS.

2. AERIAL IMAGERY SOURCE: CITY AND COUNTY OF SF, 2014



**HALEY ALDRICH** PACIFIC GAS AND ELECTRIC COMPANY (PG&E)  
SAN FRANCISCO, CALIFORNIA






100' BAND GROUNDWATER  
MONITORING WELL MAP -  
BAKER ST. TO LAGUNA ST.



# **EXHIBIT 7**

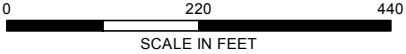


LEGEND

-  MONITORING WELL
-  PROPOSED MONITORING WELL
-  PIER 39
-  PIER 39 HARBOR
-  FORMER BEACH STREET MANUFACTURED GAS PLANT (MGP)

NOTES

1. AERIAL IMAGERY SOURCE: CITY AND COUNTY OF SF, 2014



**HALEY  
ALDRICH**

PACIFIC GAS AND ELECTRIC COMPANY (PG&E)  
SAN FRANCISCO, CALIFORNIA

100' BAND GROUNDWATER  
MONITORING WELL MAP -  
JONES ST. TO PIER 39

JULY 2018

EXHIBIT 7

# **EXHIBIT 8**



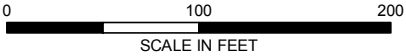


LEGEND

● SEDIMENT STATION

NOTES

1. ALL LOCATIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: CITY AND COUNTY OF SF, 2014



**HALEY  
ALDRICH**

PACIFIC GAS AND ELECTRIC COMPANY (PG&E)  
SAN FRANCISCO, CALIFORNIA

FORT MASON OFFSHORE SEDIMENT  
SAMPLING LOCATION MAP

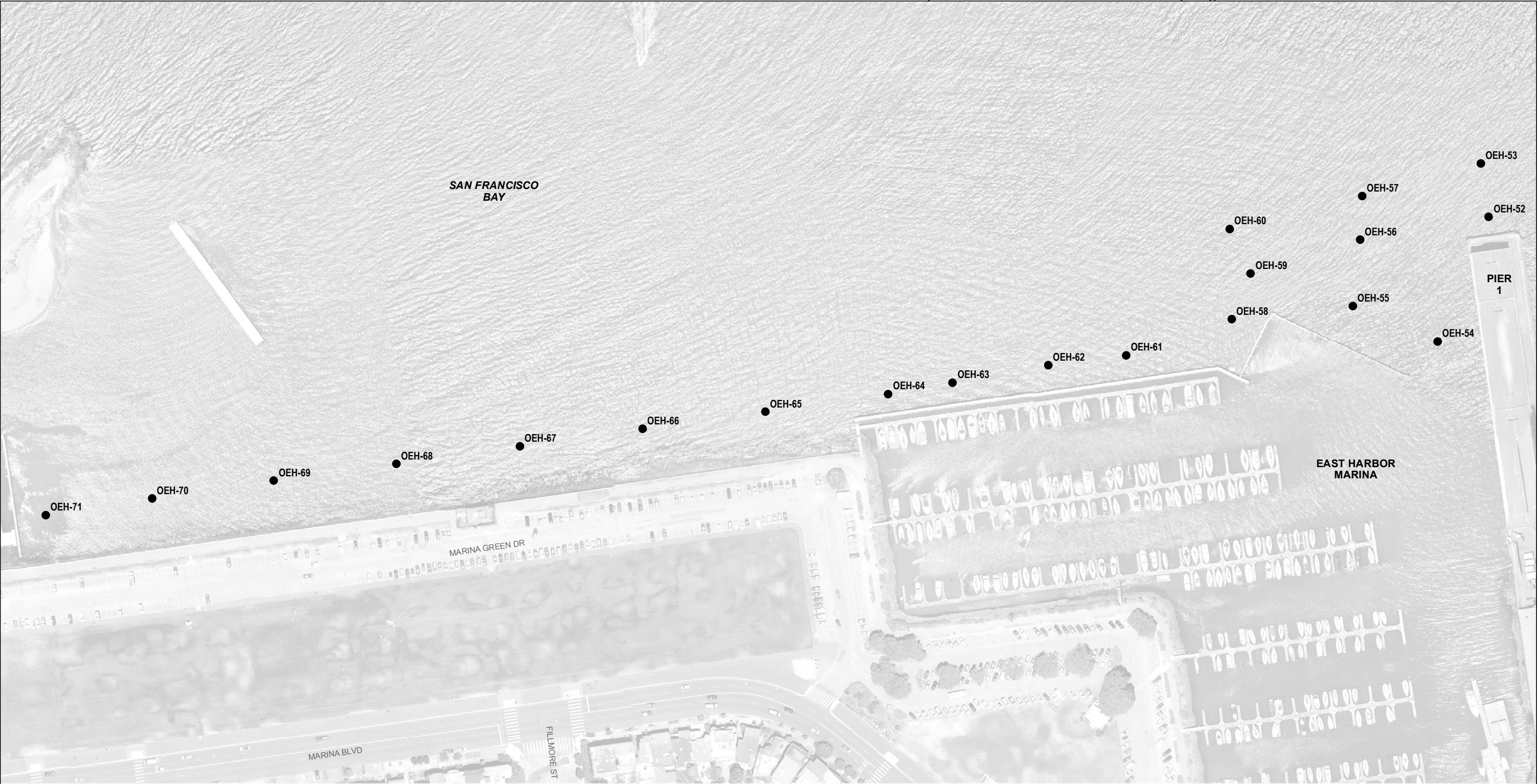
JULY 2018

EXHIBIT 8



# **EXHIBIT 9**



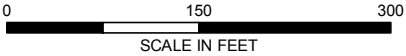


LEGEND

● SEDIMENT STATION

NOTES

- 1. ALL LOCATIONS ARE APPROXIMATE.
- 2. AERIAL IMAGERY SOURCE: CITY AND COUNTY OF SF, 2014



HALEY  
ALDRICH

PACIFIC GAS AND ELECTRIC COMPANY (PG&E)  
SAN FRANCISCO, CALIFORNIA

NEW MARINA OFFSHORE SEDIMENT  
SAMPLING LOCATION MAP

JULY 2018

EXHIBIT 9



# **EXHIBIT 10**



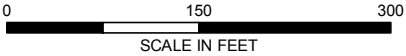


LEGEND

- PLANNED SEDIMENT STATION
- POTENTIAL STEP-OUT SEDIMENT STATION

NOTES

- 1. ALL LOCATIONS ARE APPROXIMATE.
- 2. AERIAL IMAGERY SOURCE: CITY AND COUNTY OF SF, 2014



HALEY  
ALDRICH

PACIFIC GAS AND ELECTRIC COMPANY (PG&E)  
SAN FRANCISCO, CALIFORNIA

ILLUSTRATIVE EXAMPLE OF NEW  
MARINA OFFSHORE SEDIMENT  
STEP-OUT SAMPLING SCENARIO

JULY 2018

EXHIBIT 10



# **EXHIBIT 11**

**Exhibit 11 –Basis for Developing a Conservative Proxy for PWeq**

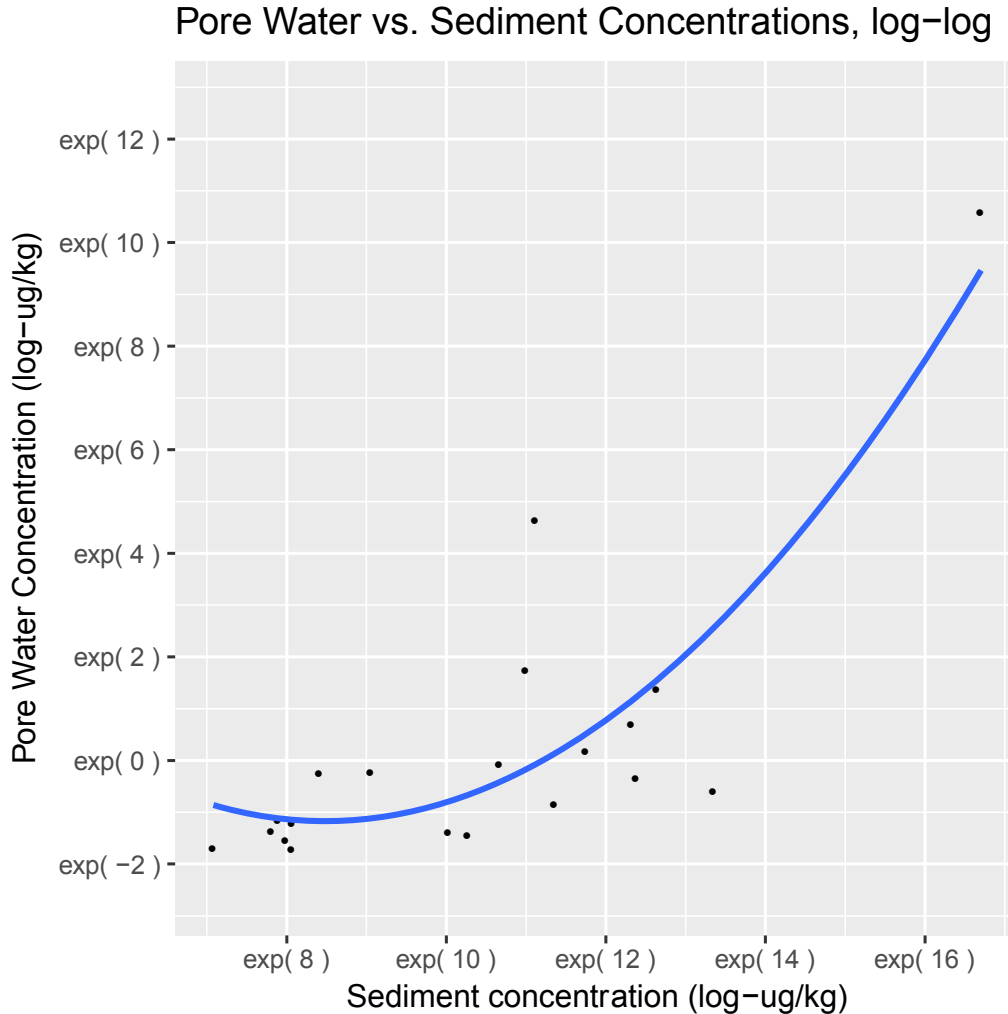
This Exhibit describes how bulk sediment PAH data will be used to predict Total PAH (sum of the EPA-34 PAHs) concentrations in pore water, to determine if the Chemical Performance Standard of 15 µg/L Total PAH has been exceeded. If a statistically acceptable correlation ( $R^2 > 0.8$ ) between bulk sediment characteristics and pore water EPA PAH-34 concentrations cannot be demonstrated, the conservative method outlined below (conservative proxy) will be used to estimate total EPA PAH-34 concentrations in sediment pore water using total PAH concentrations in bulk sediment.

Data collected by PG&E during 2017 as part of the Outside East Harbor Shallow Sediment Investigation will be included in the evaluation together with additional samples collected from the Pier 39 to 45 sediment investigation as described below.

**Pier 39 to 45 sediment Sampling Locations.** Twenty (20) stations out of an existing 95 surface sediment sampling stations where bulk sediment sampling has already occurred will be sampled for pore water and co-located bulk sediment. The sampling stations are not geographically equally distributed but instead include stations in areas with anticipated bulk sediment concentrations distributed throughout the range of total Regional Monitoring Program (RMP) PAH-25 concentrations in current surface sediments. The following summarizes the number of stations sampled within various surface sediment total PAH-25 concentration ranges, based on the previous sediment sampling:

- 1 station < 4.5 mg/kg [4.5 mg/kg = SF Bay Ambient for “muddy” sediment]
- 1 station between 4.5 and 10 mg/kg
- 3 stations between 10 and 30 mg/kg
- 4 stations between 30 and 44.8 mg/kg [44.8 mg/kg = ERM, screening level above which adverse effects to invertebrates are considered likely]
- 5 stations between 44.8 and 100 mg/kg
- 6 stations > 100 mg/kg

**Outside East Harbor Shallow Sediment Investigation.** Below is an example plot of the 20 pairs of outside East Harbor data and on a log-log scale, without discarding any data pairs as potential outliers, which demonstrates that there is a somewhat strong relationship between bulk sediment PAH concentrations and pore water PAH concentrations. This relationship is modeled below with a simple 2nd-order polynomial to fit the curvature in the signal (how sediment concentrations change as a function of pore water concentrations). The plot below shows a scatter plot between pore water and bulk sediment PAH concentrations on the log-log scale. The  $R^2$  value for this particular model is 0.71



This limited data set does not result in a correlation  $R^2 > 0.8$  but suggests that a larger data set might produce a higher coefficient of determination. Therefore, additional samples will be collected and used to determine if a statistically acceptable correlation exists.

**Dataset for Developing a Conservative Proxy for PW<sub>eq</sub>.** The dataset to be evaluated will include twenty (20) sediment-pore water sample pairs from twenty (20) stations collected in the Outside East Harbor Shallow Sediment Investigation. The dataset will also include sixty (60) additional sample pairs collected from twenty (20) stations at Pier 39 to 45 (3-samples at three depth intervals, 0-0.5', 1-1.5' and 2-3', from 20 locations). Sediment-pore water sample pairs will be excluded from evaluation for any of the following reasons: 1) presence of NAPL in bulk sediment; and 2) filtered pore water (from the Outside East Harbor filtration comparison).



**EXECUTION VERSION - CONSENT DECREE**  
**SAN FRANCISCO HERRING ASSOCIATION, et al., v. PACIFIC GAS AND ELECTRIC COMPANY, et al. (N.D. Cal. Case No. 3:14-cv-04393-WHO (JCS))**

The following process will be used to determine a relationship between bulk sediment concentrations and pore water, and provides a conservative estimator should it be necessary:

1. Use statistical computing software to find a best fit model for 1st and 2nd order polynomials (i.e., linear or quadratic) on a log-log scale with Ordinary Least Squares or Maximum Likelihood algorithms on all paired bulk and pore water data without outlier removal.
2. Calculate the  $R^2$  model for the regression models and select the regression model with the highest  $R^2$  coefficient-of-determination.
3. If the highest  $R^2$  value for the regression models is at least 0.8, select the regression model with the highest  $R^2$  value as sufficient for estimating PW<sub>eq</sub>.
4. If the highest  $R^2$  value for the regression line models is below 0.8, then:
  - a. Apply 95% confidence intervals on the best linear fit, exclude data points beyond the 95% confidence intervals, and re-calculate the  $R^2$  model for the regression lines with the outliers excluded.
  - b. If the highest  $R^2$  value for the regression models, excluding 95% confidence interval outliers, is at least 0.8, select the regression model with the highest  $R^2$  value as sufficient for estimating PW<sub>eq</sub>.
5. If the highest  $R^2$  value for the regression models is still below 0.8, then:
  - a. Identify the bulk concentration that equates to a pore water concentration of Total Trigger PAHs of 15  $\mu\text{g/L}$  for each regression model.
  - b. Limit the dataset of bulk sediment concentrations to values two orders of magnitude less than and greater than the bulk concentration that equates to a pore water concentration of Total Trigger PAHs of 15  $\mu\text{g/L}$  for each regression model, then perform steps 1 through 3 on the Trimmed Dataset.
  - c. If the highest  $R^2$  value for any of the regression models is at least 0.75, select the regression model with the highest  $R^2$  value as sufficient for estimating PW<sub>eq</sub>.
  - d. If the highest  $R^2$  value determined with the regression models for the Trimmed Dataset resulting from 5.b. ("Trimmed Dataset") is below 0.75, then:
    - i. Select the nonlinear regression model from 5.b with the highest  $R^2$  value determined for the trimmed dataset, then:
    - ii. Calculate projected pore water Total Trigger PAHs ("Projected Pore Water") for all bulk sediment samples in the Trimmed Dataset with the highest  $R^2$  value trimmed regression equation;
    - iii. Calculate a direct Conversion Factor ("CF") using the following equation:  $\text{CF} = \text{Projected Pore Water concentration} / \text{bulk sediment concentration}$ ; and
    - iv. Select the 95<sup>th</sup> percentile of the CF dataset to calculate the PW<sub>eq</sub> conservative proxy that may be used to estimate Total Trigger PAHs in pore water for bulk sediment with PAH concentrations.

# **EXHIBIT 12**

**EXHIBIT 12**  
**Pore Water Sampling Protocol**

This Exhibit describes a sediment pore water sampling and analysis protocol to be implemented as part of new offshore sediment investigations and related sediment monitoring performed under the terms of a consent decree

**Pore Water Sampling and Analysis.** At each pore water station, pore water samples will be collected from three depth intervals: 0 to 0.5, 1.0 to 1.5, and 2.0 to 3.0 feet below mudline. At each station, three pore water samples (one from each depth interval) will be collected simultaneously using an array of screened piezometers inserted into sediment through a metal plate with a minimum size of 18" square fitted with diaphragms to stabilize the sediment surface before penetration of the three piezometers. Three dedicated screen assemblies (screen size - 0.03- inch screen) will be fabricated for each station. The only components that are re-used are the metal plate, the weights, and the retrieval wires. The device includes three 1-inch diameter polyvinyl chloride (PVC) pipes which extend into the sediment, each with a 6-inch or 12-inch long slotted screen at the specified depth interval. The sampling screens will be isolated from the overlying surface water by an impermeable seal. The three sets of Teflon tubing will be connected to three separate peristaltic pumps on the sampling vessel. Low-flow sampling techniques will be used to gently purge the volume of water in the tubing prior to sample collection.

To minimize the chance of vertical pore water migration, all three sample intervals will be sampled simultaneously using low pumping rates to encourage horizontal flow. For each screened interval, after purging a single tubing volume, a small aliquot of pore water will be collected, and field parameters measured (temperature, salinity, dissolved oxygen, oxidation-reduction potential). A single 1-Liter sample will then be collected from each screened interval for analysis of PAHs and total organic carbon (TOC). When there is adequate sample volume, field parameters will be measured (temperature, salinity, dissolved oxygen, oxidation-reduction potential). An ambient sample of San Francisco Bay water will be collected from immediately above the sediment surface and measured for field parameters (temperature, salinity, dissolved oxygen, oxidation-reduction potential). Samples will be retained on ice under chain-of-custody until shipped to the analytical laboratory. Porewater samples will not be filtered; rather, the laboratory will flush from porewater samples visual particles that have settled in the separatory funnel.

**Sediment Sampling and Analysis.** After collection of the pore water samples, co-located sediment samples (0.0 to 0.5, 1.0 to 1.5, and 2.0 to 3.0 feet below mudline) will be collected from a short core, nominally 4 feet in length, advanced by pushing or gravity. The samples will be homogenized for aliquoting sediment into jars for PAH and TOC analysis. Sufficient remaining bulk sediment will be collected into zip-lock bags for grain size analysis.

# **EXHIBIT 13**





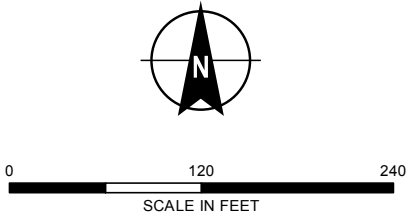
**LEGEND**

▲ SEDIMENT SAMPLING LOCATION

— APPROXIMATE LIMITS OF HISTORICAL MANUFACTURED GAS PLANT (MGP)

**NOTES**

1. AERIAL IMAGERY SOURCE: CITY AND COUNTY OF SF, 2014



**HALEY  
ALDRICH**

PACIFIC GAS AND ELECTRIC COMPANY (PG&E)  
SAN FRANCISCO, CALIFORNIA

EAST HARBOR PRIOR SAMPLING  
LOCATIONS MAP

JULY 2018

EXHIBIT 13

# **EXHIBIT 14**



## EXHIBIT 14

### List of "Sediment/Pore Water PAHs"

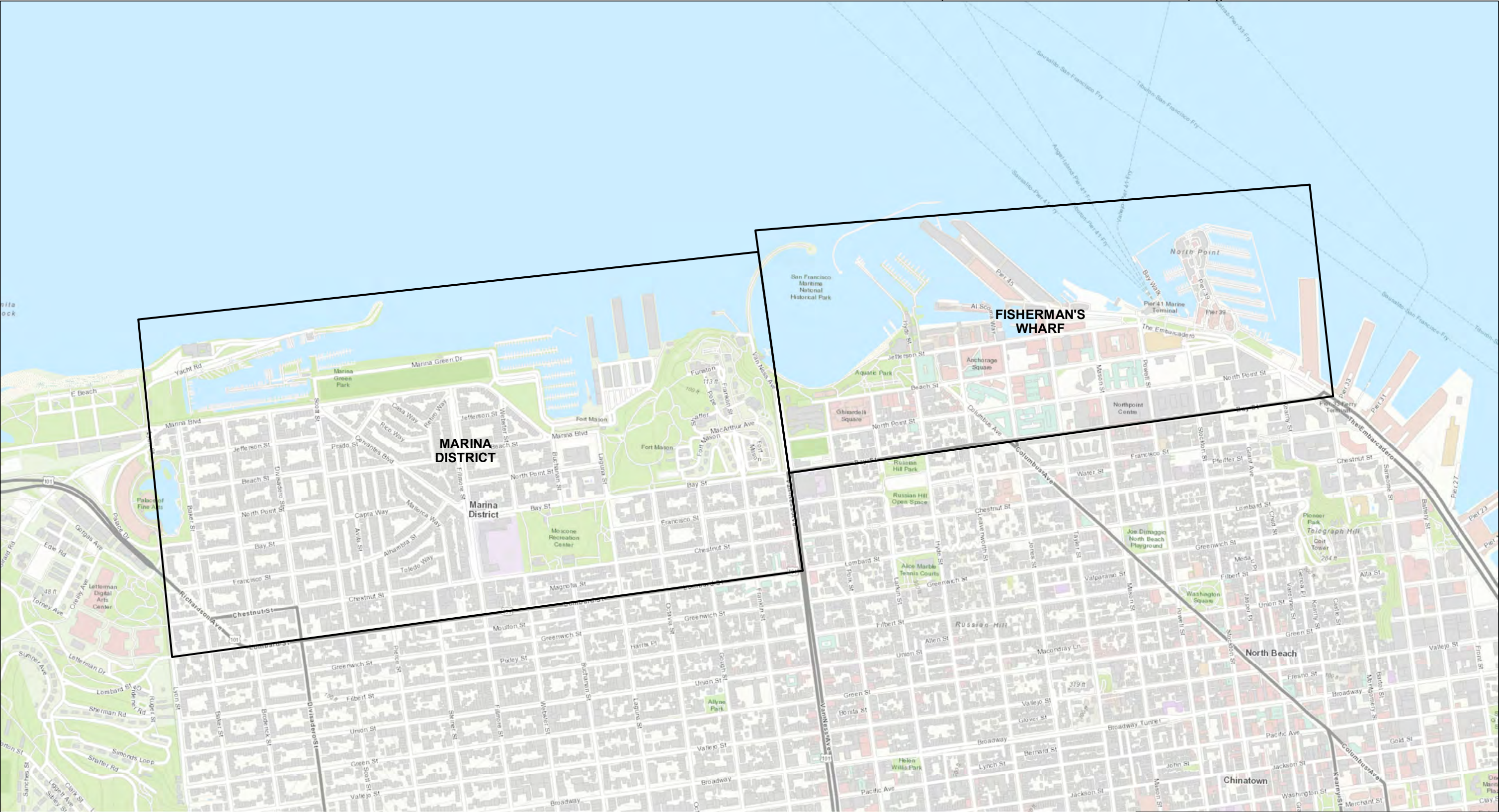
Naphthalene*	C3-Phenanthrenes/Anthracenes
C1-Naphthalenes	C4-Phenanthrenes/Anthracenes
C2-Naphthalenes	1-Methylphenanthrene (1MP)*
C3-Naphthalenes	2-Methylphenanthrene (2MP)
C4-Naphthalenes	3-Methylphenanthrene (3MP)
2-Methylnaphthalene*	9/4-Methylphenanthrene (9MP)
1-Methylnaphthalene*	2-Methylanthracene (2MA)
2,6-Dimethylnaphthalene*	1-Methyl-7-isopropylphenanthrene (Retene)
2,3,5-Trimethylnaphthalene*	Fluoranthene*
Acenaphthylene*	Pyrene*
Acenaphthene*	C1-Fluoranthenes/Pyrenes
Biphenyl*	C2-Fluoranthenes/Pyrenes
Dibenzofuran	C3-Fluoranthenes/Pyrenes
Carbazole	C4-Fluoranthenes/Pyrenes
Fluorene*	1-Methylpyrene
C1-Fluorenes	2-Methylpyrene
C2-Fluorenes	4-Methylpyrene
C3-Fluorenes	Benzo(b)fluorene
Benzothiophene	Benzo(c)fluorene
C1-Benzo(b)thiophenes	Benzo(a)anthracene
C2-Benzo(b)thiophenes	Chrysene/Triphenylene*
C3-Benzo(b)thiophenes	C1-Chrysenes
C4-Benzo(b)thiophenes	C2-Chrysenes
Naphthobenzothiophene	C3-Chrysenes
C1-Naphthobenzothiophenes	C4-Chrysenes
C2-Naphthobenzothiophenes	Benzo(b)fluoranthene*
C3-Naphthobenzothiophenes	Benzo(j)+(k)fluoranthene**
C4-Naphthobenzothiophenes	Benzo(a)fluoranthene
Dibenzothiophene*	Benzo(e)Pyrene*
C1-Dibenzothiophenes	Benzo(a)Pyrene*
C2-Dibenzothiophenes	Perylene*
C3-Dibenzothiophenes	Indeno(1,2,3-cd)pyrene*
C4-Dibenzothiophenes	Dibenz(a,h)+(a,c)anthracene*
1-Methyldibenzothiophene (1MDT)	Benzo(g,h,i)perylene*
2/3-Methyldibenzothiophene (2MDT)	Bicyclic Aliphatic Hydrocarbons
4-Methyldibenzothiophene (4MDT)	Cis/Trans-Decalin
Anthracene*	C1-Decalins
Phenanthrene*	C2-Decalins
C1-Phenanthrenes/Anthracenes	C3-Decalins
C2-Phenanthrenes/Anthracenes	C4-Decalins

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\* Indicates constituents included in Regional Monitoring Program (RMP) PAH-25 list. PAHs (µg/kg dry wt), related heterocyclic aromatic hydrocarbons, and bicyclic aliphatic hydrocarbons - EPA Method 8270D-SIM (Modified) Note: dry wt for sediment, wet wt for tissues, ng/L for elutriates.

# **EXHIBIT 15**





0 1,000 2,000

SCALE IN FEET

BASE MAP SOURCE: ESRI

**HALEY  
ALDRICH**

PACIFIC GAS AND ELECTRIC COMPANY (PG&E)  
SAN FRANCISCO, CALIFORNIA

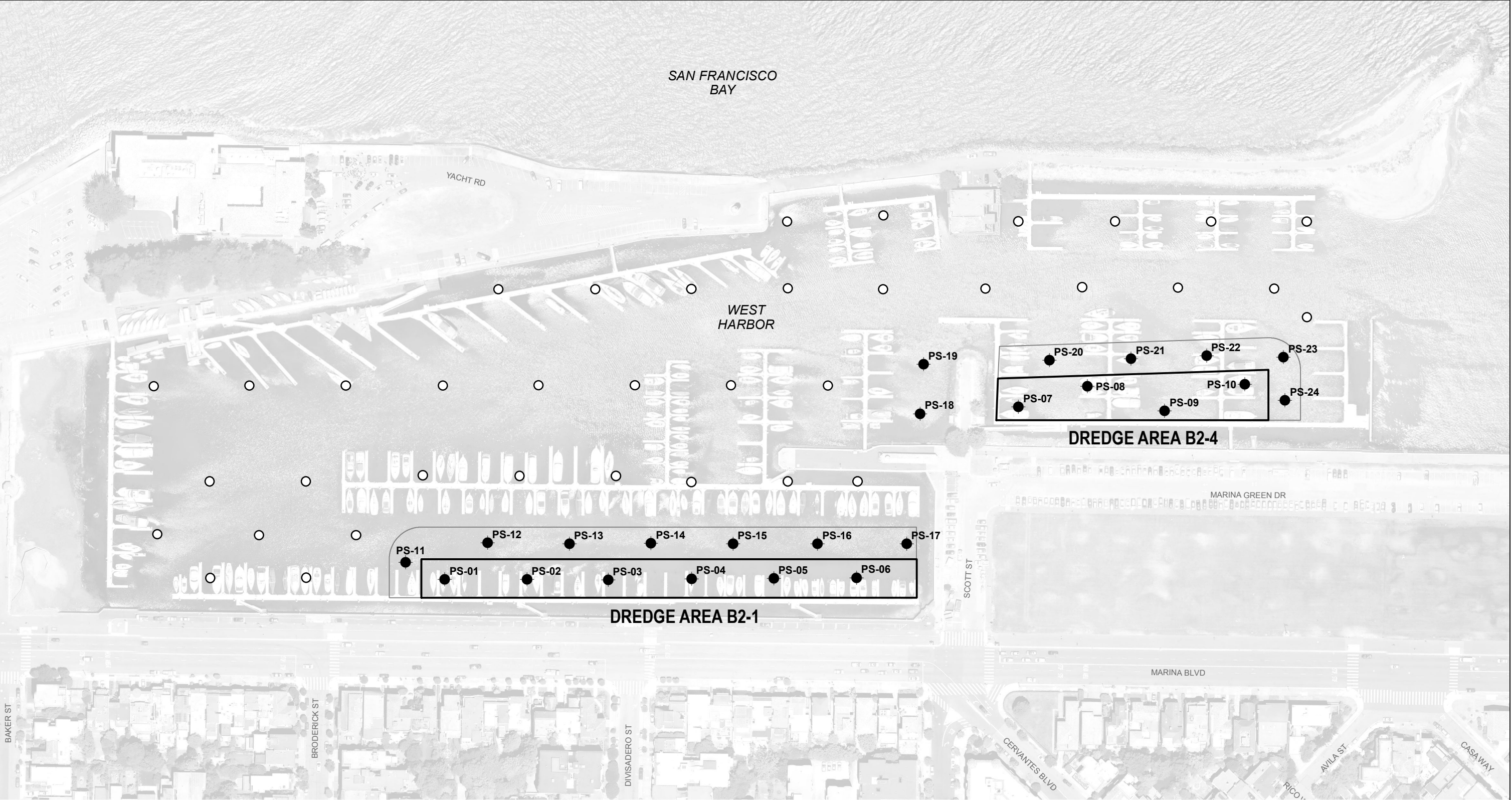
"UPSET EVENT" GEOGRAPHICAL  
BOUNDARY MAP

JULY 2018

EXHIBIT 15

# **EXHIBIT 16**



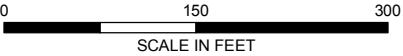


LEGEND

- PASSIVE SAMPLE STATION
- POTENTIAL STEP-OUT STATION
- DREDGE AREA
- PERIMETER BOUNDARY

NOTES

- 1. ALL LOCATIONS ARE APPROXIMATE.
- 2. AERIAL IMAGERY SOURCE: CITY AND COUNTY OF SF, 2014



HALEY  
ALDRICH

PACIFIC GAS AND ELECTRIC COMPANY (PG&E)  
SAN FRANCISCO, CALIFORNIA

WEST HARBOR SAMPLING  
AND POTENTIAL STEP-OUT  
LOCATION MAP

JULY 2018

EXHIBIT 16

# **EXHIBIT 17**



**EXECUTION VERSION - CONSENT DECREE**  
**SAN FRANCISCO HERRING ASSOCIATION, et al., v. PACIFIC GAS AND ELECTRIC COMPANY, et al.**  
**(N.D. Cal. Case No. 3:14-cv-04393-WHO (JCS))**

**EXHIBIT 17**

**Locations and Screen Depth Intervals for Grab Groundwater Samples and Compliance Wells in 100' Band**

Location ID	Screen Interval (feet bgs)		Status
	Top	Bottom	
Grab Groundwater Sample Locations shown in Exhibit 5:			
UB-12	10.0	12.0	To be sampled after Consent Decree is entered.
	19.0	21.0	
UB-13	10.0	12.0	To be sampled after Consent Decree is entered.
	19.0	21.0	
UB-14	10.0	12.0	To be sampled after Consent Decree is entered.
	18.5	20.5	
	23.0	25.0	
UB-15	12.0	14.0	To be sampled after Consent Decree is entered.
	18.0	20.0	
	23.0	25.0	
Between Baker Street and Scott Street (Locations shown in Exhibit 6 from west to east):			
MW13A	9.7	14.7	Existing well approved as 100' Band Compliance Well
MW13B	19.2	24.2	
MW14A	9.8	14.8	Existing well approved as 100' Band Compliance Well
MW14B	20.2	25.2	
MW15A	9.9	14.9	Existing well approved as 100' Band Compliance Well
MW15B	18.8	23.8	
MW16A	9.4	14.4	Existing well approved as 100' Band Compliance Well
MW16B	15.5	20.5	
Between Scott Street and Webster Street (Locations shown in Exhibit 6 from west to east):			
CMT05A	9.0	9.6	Existing well approved as 100' Band Compliance Well
CMT05B	16.8	17.4	
CMT05C	20.1	20.7	
MW17	10.3	15.3	Existing well approved as 100' Band Compliance Well
MW17B	--	--	Proposed location agreed, not installed. Screen interval TBD <sup>1,2</sup>
TBD (A)	--	--	Proposed location of well pair agreed, not installed. Location ID and screen interval TBD <sup>1,2</sup> . (A)=shallow interval; (B)=deeper
TBD (B)	--	--	
TBD (A)	--	--	Proposed location of well pair agreed, not installed. Location ID and screen interval TBD <sup>1,2</sup> . (A)=shallow interval; (B)=deeper
TBD (B)	--	--	
MW18	10.6	15.6	Existing well approved as 100' Band Compliance Well
MW18B	20.0	25.0	Agreed location and interval, not installed.
MW19	10.6	15.6	Existing well approved as 100' Band Compliance Well
MW19B	20.5	25.5	Agreed location and interval, not installed.
TBD (A)	--	--	Proposed location of well pair agreed, not installed. Location ID and screen interval TBD <sup>1,2</sup> . (A)=shallow interval; (B)=deeper
TBD (B)	--	--	
TBD (A)	--	--	Proposed location of well pair agreed, not installed. Location ID and screen interval TBD <sup>1,2</sup> . (A)=shallow interval; (B)=deeper
TBD (B)	--	--	
MW20	11.2	16.2	Existing well approved as 100' Band Compliance Well
MW20B	21.0	26.0	Agreed location and interval, not installed.

**EXECUTION VERSION - CONSENT DECREE**  
**SAN FRANCISCO HERRING ASSOCIATION, et al., v. PACIFIC GAS AND ELECTRIC COMPANY, et al.**  
**(N.D. Cal. Case No. 3:14-cv-04393-WHO (JCS))**  
**EXHIBIT 17**

**Locations and Screen Depth Intervals for Grab Groundwater Samples and Compliance Wells in 100' Band**

Location ID	Screen Interval (feet bgs)		Status
	Top	Bottom	
Between Webster Street and Laguna Street (Locations shown in Exhibit 6 from west to east):			
TBD (A)	--	--	Proposed location of well pair agreed, not installed. Location ID and screen interval TBD <sup>1,2</sup> . (A)=shallow interval; (B)=deeper
TBD (B)	--	--	
TBD (A)	--	--	Proposed location of well pair agreed, not installed. Location ID and screen interval TBD <sup>1,2</sup> . (A)=shallow interval; (B)=deeper
TBD (B)	--	--	
TBD (A)	--	--	Proposed location of well pair agreed, not installed. Location ID and screen interval TBD <sup>1,2</sup> . (A)=shallow interval; (B)=deeper
TBD (B)	--	--	
TBD (A)	--	--	Proposed location of well pair agreed, not installed. Location ID and screen interval TBD <sup>1,2</sup> . (A)=shallow interval; (B)=deeper
TBD (B)	--	--	
MW21A	7.3	12.3	Existing well approved as 100' Band Compliance Well
MW21B	21.3	26.3	
MW06A	9.0	11.0	Existing well approved as 100' Band Compliance Well
MW06B	13.0	15.0	
MW06C	17.0	19.0	
MW02A	9.0	11.0	Existing well approved as 100' Band Compliance Well
MW02B	17.0	19.0	
MW02C	24.0	26.0	
TBD (A)	--	--	Proposed location of well pair agreed, not installed. Location ID and screen interval TBD <sup>1,2</sup> . (A)=shallow interval; (B)=deeper
TBD (B)	--	--	
TBD (A)	--	--	Proposed location of well pair agreed, not installed. Location ID and screen interval TBD <sup>1,2</sup> . (A)=shallow interval; (B)=deeper
TBD (B)	--	--	
MW08A	9.0	15.0	Existing well approved as 100' Band Compliance Well
MW08BR	18.3	20.2	
MW08C	25 - 27	29 - 30	Agreed location; not installed, interval pending <sup>2,3</sup>
MW09A	9.0	15.0	Existing well approved as 100' Band Compliance Well
MW09B	20.0	22.0	
(Locations shown in Exhibit 7 from west to east):			
TBD (A)	--	--	Proposed location of well pair agreed, not installed. Location ID and screen interval TBD <sup>1,2</sup> . (A)=shallow interval; (B)=deeper
TBD (B)	--	--	
MW01	7.0	11.8	Existing well approved as 100' Band Compliance Well
MW02	8.0	12.8	Existing well approved as 100' Band Compliance Well
MW03	9.0	13.8	Existing well approved as 100' Band Compliance Well
TBD (A)	--	--	Proposed location of well pair agreed, not installed. Location ID and screen interval TBD <sup>1,2</sup> . (A)=shallow interval; (B)=deeper
TBD (B)	--	--	

**Abbreviations:**

bgs: below ground surface.

TBD: To Be Determined after Consent Decree is entered.

**Notes:**

1. Exploratory boring to be drilled after Consent Decree is entered.
2. Well screen interval to be based on boring log and criteria set forth in Consent Decree paragraph 4.2.3.2.
3. Well screen will be designed to intercept sand zone impacted by NAPL identified in boring log for MW08B at 27 to 29 ft bgs.